AMERICAN GAS ASSOCIATION MONTHLY

August 1928

Volume X Number 8

Natural Gas Displaces Coal in Bakeries
By RAYMOND F. MANN

Analyzing the Industrial Gas Survey
By ELMER B. DUNKAK

Tenth Convention Will Be Biggest and Best

The Utilities as a Field for Investment
By SAMUEL INSULL

An Experiment in Gas House Heating
By E. C. UHLIG

What Is the Coke Situation Today?

The Menace of Government in Business
By PHILIP H. GADSDEN

The Application of the Probability Curve to the Life of Pipe
By V. V. KENDALL

Proceedings

of

Ninth A. G. A. Convention

(Chicago, 1927)

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10th Annual
Convention
of the A. G. A.

Atlantic City, N. J.
October 8 to 12

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to Be
There Then

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For statements and opinions contained in papers and discussions appearing herein, the Association does not hold itself responsible.

Entered as Second Class Mail Matter at the Post Office at Brattleboro, Vermont, February 10th, 1922, under the Act of March 3, 1879.

Our Own Who's Who

XXXIX

Samuel W. Meals

BORN in Callensburg, Clarion County, Pa., in 1869. Attended public schools, old Callensburg Academy, and Clarion State Normal School. Studied telegraphy while attending school at Turkey City, and here also pulled his first string of rods in the Oil County. Taught school in 1887-1888. Worked a year in Bradford oil fields, and from 1889 to 1892 in Butler County oil fields. In 1892 started as roustabout for South Penn. Oil Co. in Mannington, West Va., and was with this company until 1902. Had field experience in all departments, and for the last three years with this company was superintendent of Nineveh district. During this time the Hope Natural Gas Co. was organized, and as superintendent of the South Penn. Oil Co. was also one of the first superintendents of the Hope company. In 1902 organized Syndicate Oil and Gas Co., disposing of holdings in 1904 to become superintendent of West Va. properties of Carnegie Natural Gas Co. In 1918 was made general manager of Carnegie Natural Gas Co., with offices at Pittsburgh, and in 1919 was made vice-president. In 1921 was elected president, which position he now holds.

Was president of Pennsylvania Natural Gas Men's Ass'n in 1926-27. Had been member of board of directors of Natural Gas Association of America for several years, and is now chairman of Natural Gas Department of American Gas Association, and is a departmental vice-president of the A. G. A.

AMERICAN GAS ASSOCIATION MONTHLY

Vol. X AUGUST, 1928 No. 8

Prominent Leaders Will Address Convention

Gathering of American Gas Association, at Atlantic City, N. J., October 8 to 12, Will Break All Records

WHEN the Tenth Annual Convention of the American Gas Association is called to order by President Fogg's gavel on the Million Dollar Pier at Atlantic City, N. J., Oct. 8-12, the entire organized gas industry of North America will be opening the largest and most important gathering in its history.

Atlantic City, the meeting place of the A. G. A. from October 8 to 12—Plan now to be there then!

Speakers of world-wide fame and leaders in industrial, utility, and financial spheres will address the convention. An exhibition of greater size than any held previously will contain the latest in appliances and equipment. Entertainment that will suit the palate of the gas man, together with the many attractions of Atlantic City, will insure a good time for all.

While the program of the convention will not be printed until the September issue of the MONTHLY is off the press, it is already apparent that the business sessions will be highly interesting and timely. The General Sessions program will be concerned with addresses touching on vital phases of the gas industry's development, and the section and department meetings will be made up of papers and reports of a most valuable character to those interested in the specific problems dealt with by the sections and departments.

Just a few high spots of the General Sessions program will be enough to get every gas man to make his reservations at Atlantic City for the week of October 8th.

Among the headliners are:

Silas H. Strawn, president of the American Bar Association, will address the convention on an appropriate subject. This will be a feature which no gas man can afford to miss.

Walter M. Harrison, president of the American Society of Newspaper Editors, will have for his subject, "Newspapers and Utilities." In the present-day practice of intensive reading of newspapers, it is evident that Mr. Harrison will have a real message.

Wm. A. Prendergast, chairman of the New York Public Service Commission, will address the gathering on "Regulative

Six thousand gas men will meet on the Million Dollar Pier for the tenth A. G. A. Convention, Oct. 8-12

Problems." Mr. Prendergast is a speaker of splendid repute, and he will have "something to say."

Arthur D. Little, of Boston, Mass., will speak on the important subject of "Research Today and Tomorrow."

Arthur W. Thompson, president of The United Gas Improvement Co., will present an address on "Utility Organization and Service."

Katherine Fisher, editor, *Good Housekeeping* Institute, will have as her subject "The Woman's View of the Gas Industry."

R. W. Gallagher, chairman of the Laboratory Managing Committee, will take as the subject of his address, "Better Appliances—the Laboratory's Contribution."

B. J. Mullaney, vice-president of the A. G. A., will cover the "Economic Aspects of the Laboratory Approval Seal," in his address.

In addition there will be several other addresses by men prominent in American business today, as well as the president's address, by Oscar H. Fogg, and other interesting features.

At the Public Relations Symposium, to be held the evening of October 10, George B. Cortelyou, the first president of the A. G. A., will make a brief address. This will be followed by an address on "Education and Industry," by Dr. James B. Angell, president of Yale University. There will be suitable entertainment and music at this event.

The entertainment features of the convention are in the hands of a particularly capable committee, of which W. J. Clark is chairman. He is assisted by R. S. Doull, W. M. Fowler, Chester Grey, Donald McDonald, W. G. Murfit, E. A. Norman, J. D. Taylor, A. L. Tossell, W. E. Derwent, F. A. Lemke, N. C. McGowen, H. L. Whitelaw, and Thos. Scofield, secretary.

Definite announcement of the entertainment program will be given in the September issue of the MONTHLY.

The section and department programs are being arranged to give the individual gas man the benefit of individual discus-

(Continued on page 508)

Official Convention Stickers Now Available

COPIES of the official Tenth Annual A. G. A. Convention sticker are now available at Association Headquarters. These stickers are printed in color, and are especially attractive.

Member companies are requested to write for their stickers as soon as possible. There is no charge.

A special sticker has been prepared for exhibitors, which is exactly like the one shown here, except it is also in colors and at the bottom has the words, "Visit Our Exhibit."

Quantity lots of the official convention sticker, printed in attractive colors, will be supplied free of charge on request

The Menace of Government in Business

The Amazing Industrial Civilization of the United States Today is Threatened

By PHILIP H. GADSDEN
Vice-President, The United Gas Improvement Co., Philadelphia, Pa.

P. H. Gadsden

THROUGHOUT the history of business, advertising has been the chief agency for developing new markets and the main reliance in the constantly widening field of competition.

It is a far cry from the primitive manufacturer of stone arrowheads, fashioning his product with a flint hammer by hand, to the highly mechanized factory of today. Advertising has kept stride with this progress. Indeed, it may truthfully be said that it has set the pace in much of this progress.

Both in social and economic progress the creative force of advertising has been literally tremendous. No other factor has contributed more to our modern industrial process of mass production at low unit cost. Advertising has provided the mass market to use the products of an industry geared to high productive capacity. It has nationalized, even internationalized, markets.

The motor car is a peculiarly apt illustration. In very truth it may be described as an industry that advertising, in no small measure, has made. In its development management, finance and advertising sat as equals about its council board. It is typical of the results of quantity production, made possible by national and international markets. These results are a continuing increase in the excellence of the product and a continual reduction of unit costs to the user.

Take mechanical refrigeration. According to figures, recently published in *Motor,* 600 units of mechanical refrigeration were sold in 1914. Last year, 365,000 units were sold. Five years ago, $7,800 were spent in journals of national circulation advertising mechanical refrigeration. Last year a million and a half were spent.

It is estimated the electric light and power and gas industries spend approximately twenty millions a year on advertising, with the result that the coal stove has been practically banished from the kitchen and electric appliances of all kinds are rapidly taking the drudgery out of American life.

Illustrations of the contribution of advertising to mass production through mass marketing, and, indeed, of its contribution to the comfort of modern living, could be multiplied many fold, but let us pass to the consideration of advertising as a factor of every-day living.

As a stimulant to mass production, advertising has worked mightily toward high employment and wage levels. This in itself is an economic and a social achievement of the first magnitude.

The American standard of living is an eminent achievement. High wage and high employment levels make it possible. It is higher than ever known elsewhere in the world at any time. Millions, today, enjoy comforts and luxuries—take them as a matter of course—that were beyond a potentate's purchase a few centuries ago.

Advertising creates desire, which requires mass production for its gratification, which, in turn, makes for high wages and higher standards of living. This is but a single phase of the story, but it is typical of them all.

Advertising, moreover, has proved a potent force in a new alignment of busi-

Abstract of address presented at International Advertising Ass'n Convention, at Detroit, Mich., July 9, 1928.

ness standards and practices and a proper evaluation of the relations of business with its public. Business conducted in a bright, revealing light of publicity cannot engage in shady practices. None has better phrased this than Ernest Elmo Calkins in his book "Business the Civilizer."

"A business which advertises," says Mr. Calkins, "which puts its name before the public and puts its trade mark on the goods, has entered into a contract with the public. It must live up to the contract. It must make good. This is beneficial. It insures better goods and better service."

As an exponent of proper trade and business practice, advertising is no novice; it speaks out of the fullness of a bitter experience, for advertising once prostituted its great gifts to the dirty chores of the charlatan. But advertising cleansed its garments of this stain and stands, today, a dynamic advocate of business confidence, based on fair dealing and honest service.

The investment banker is no more vigorous to close the market place to the hawker of fake securities; the bar is no more alert to outlaw the shyster; the medical faculty is no more zealous to ban the quack; the ministry is no more ready to unfrock the religious faker than is the preponderent sentiment and practice of the advertising profession, as such, to outlaw advertising quackery.

Long the potent aid of the manufacturer in his competition with his fellow manufacturer; long the super salesman of the merchant in his rivalry with his fellow merchant; long the pioneer of new markets for the practical application to new and wider uses of the products of scientific and inventive genius, as the electrical industry can well testify, advertising now becomes a most potent weapon in the arsenal of a new competition, in which industry tries its mettle against industry, each bidding for a larger share of the consumer's dollar; and in which community vies with community and city with city, each ambitious to achieve a larger place in the industrial scheme of things.

Thus manufacturers unite to advertise their common product.

Oil and gas and coal are vigorous competitors to heat America, and electricity and the ice man are vigorous rivals for the task of keeping it cool. And so throughout the industrial and business drama, competition is more intense and more skillful, and advertising is its tutelary genius.

It is competition in business which has created the increased demand for advertising. And advertising, in turn, has been the chief reliance of business successfully to meet competition. It has been a powerful agency to capture new fields and to retain them under the intense competitive conditions of modern business.

A NEW COMPETITION

There is new competition which threatens American business at this time. To meet this new competition, the traditions of one hundred and fifty years, the experience and training of American business, have left us totally unprepared. I refer to competition by the Federal Government—the increasing efforts to inject the Federal Government into the field of business.

We have been taught to believe that our government was established to insure a free field and a fair contest for the interplay of the initiative and enterprise, the self-reliance and industry of its citizens. On this theory and relying upon this philosophy, American business has constructed this amazing industrial civilization of today.

But signs are not wanting that there is developing in the United States on the part of certain groups a demand that we abandon this principle which up to the present time has distinguished our form of government from all others, and embark upon a line of policy which would sap and undermine that initiative and enterprise which is characteristic of us as a people. In this new competition there

can and must be no compromise. It is war to the end.

There are two distinct schools of political thought in this country today. It is a conflict of two utterly antagonistic ideas—a struggle for supremacy between a thinly disguised socialism and the traditional policy that has enabled this country, in a century and a half, literally to amaze the world with its economic and social progress. It is the struggle between private ownership and government ownership.

The issue is squarely presented—Shall the Government confine its activities to the political field and leave the field of business to the initiative and enterprise of its citizens? If the Government enters into any industry, private capital—proverbially timid—will retire from it.

The only thing which can shake the credit and disturb the progress of our industrial development is the menace of Government competition.

The Government has already largely monopolized the merchant shipping business of the United States.

The Muscles Shoals Bill, passed by both houses of Congress but vetoed by the President, proposed to put the Federal Government into the fertilizer business. It also authorized the Government both to generate and distribute electrical energy in competition with private industry.

Under the Merchant Marine Bill, it was proposed that the Government should engage in the insurance business.

The Swing-Johnson Bill for the development of the Colorado River would authorize the Government not only to enter the electric power field on a gigantic scale, but to provide water on a commercial basis for irrigation and water supply purposes.

What will be the next field of business to be invaded by the Federal Government?

The main objection to such a policy on the part of the Federal Government is not that government operations are notoriously inefficient, or that it may occasion financial loss to the industry faced with such unfair competition, but that it destroys the basic principle upon which the whole of American business has been built. It strikes at the keystone of our industrial arch. It seeks to graft upon the political structure of America the outworn socialistic theories of the old world which have contributed so greatly to the present economic condition of Europe.

As Nation's Business magazine sees some present-day problems

George B. Cortelyou, ex-Secretary of the Treasury, has recently characterized the entry of the Government into business, whether national, state or local as "constitutionally unsafe, politically unwise, economically unsound, and competitively unfair."

Let me direct your attention for a moment to a little discussed phase of this aspect of the question. Much has been said from the viewpoint of the public's right to efficient service and from the viewpoint of private management and stockholdership, but little has been said from the viewpoint of the employee.

The great army of employees of private business and industry constitute a

(Continued on page 498)

Natural Gas Companies Win Advertising Prizes

Mr. Jones carrying out the ashes
IN all probability Mr. Jones would be "lugging" out the ashes if he hadn't installed a Bryant automatic gas-fired boiler. The automatic regulator on the wall acts as the fireman, and the Bryant in the cellar fills all orders for comfortable heat in every room of the Jones household. There are no ashes, dirt, or bother of any kind to worry about, and it is quite evident that both Mr. and Mrs. Jones are taking things easy with their Bryant
You, Too, Can Do It Better with Gas
Consult the Housheating Section and have a complete analysis made of your housheating problems This service incurs no obligation.
EQUITABLE GAS COMPANY
GRANT 7600
LINE 302

No longer do you –
So why should you continue to fire your furnace
Telephone Main 2000
or
Mail the Coupon
The Union Gas & Electric Company

AT the top left is the advertisement of the Equitable Gas Co. which won first prize in the recent Better Copy Contest of the Public Utilities Advertising Association. The Union Gas and Electric Co. won second prize with the advertisement at the bottom, and the Lone Star Gas Co. was awarded third prize for the advertisement shown above at the right. Details are given on the next page.

Equitable Gas Company Wins First Place in Advertising Contest

Union Gas and Electric Co. and Lone Star Gas Co. Receive Second and Third Places

THE Equitable Gas Company of Pittsburgh, Pa., is the winner of first place in the gas division in a nation-wide advertising contest conducted among the utilities of the United States by the Public Utilities Advertising Association. The award of a certificate was made at the International Advertising Association convention at Detroit, Mich., July 10.

R. S. McCarty

Kenneth Magers

Second place was awarded to the Union Gas and Electric Co., Cincinnati, Ohio, and third place went to the Lone Star Gas Co., Dallas, Texas.

R. S. McCarty is advertising manager of the Philadelphia Company and its subsidiary, the Equitable Gas Co. of Pittsburgh, Pa.

Kenneth Magers is publicity manager of The Union Gas and Electric Co., Cincinnati, Ohio.

In the electric division of the contest first place was won by the Edison Electric Illuminating Co. of Boston, Boston, Mass. The Georgia Power Co., Atlanta, Ga., was awarded first place in the transportation division, and in the telephone division honorable mention was given to the Mountain States Telephone and Telegraph Co., Denver, Colo.

Leaders in the public utility industry consider the winning of this award the highest possible honor that can be secured for their advertising. The nation-wide contest conducted by the Association attracted the interest of practically every utility in the United States, and the success of the 1928 contest is leading to plans for its continuance the coming year, according to announcement of the officials of the Public Utilities Advertising Association.

Newspaper advertisements captured all the winning places. The contest was conducted for advertising in three separate divisions: electric light and power, gas, electric railway and bus transportation. The joint cooperation of the National Electric Light Association, American Gas Association, and the American Electric Railway Association was extended in their respective fields of operation.

Announcement of the awards was made by Irving M. Tuteur, of Chicago, chairman of the Better Copy Committee of the Public Utilities Advertising Association, at the annual meeting of the Association which was assembled in Detroit as one of the departmentals of the International Advertising Association. Presentation of the certificates of award was made by Donald M. Mackie, of Jackson, Mich., President of the Public Utilities Advertising Association, acting in cooperation with representatives of the national utility associations.

The contest had for its purpose improving the standard of public utility advertising appearing in the 26,000 newspapers in the United States. More than 4000 entries were received from several hundred public utilities. Entries were also received from utility companies operating in Canada, New Zealand, and Australia.

The prize winning advertisements which are shown here also appear in the

1928

EQUITABLE GAS COMPANY
is hereby tendered this
HIGHEST AWARD
in the GAS Division

"in recognition of winning FIRST place in the Better Copy Contest (Gas Division) conducted by the Public Utilities Advertising Association for the best advertisement published by a member public utility operating company in the United States or Canada, during the period January 1, 1927 - March 31, 1928.

PUBLIC UTILITIES ADVERTISING ASSOCIATION
with the cooperation of the
AMERICAN GAS ASSOCIATION
July 10, 1928

The certificate awarded to the winner of first prize in the contest

new 1928 edition of the Better Copy portfolio together with some 600 other advertisements submitted by public utilities in the United States and Canada. This portfolio, one of the most elaborate books ever prepared by the Association, was also presented for its first public showing at the Convention and is being distributed to utilities in all parts of the country.

The judges who passed upon the prize winning advertisements in the gas division were as follows: Alexander Forward, managing director, and Charles W. Person, secretary of the Publicity and Advertising Section, American Gas Association; J. C. McQuiston, advertising manager, Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.; P. L. Thomson, publicity manager, Western Electric Company, New York City; T. J. McManis, assistant manager, publicity department, General Electric Company, Schenectady, N. Y.; Donald M. Mackie, Hodenpyl, Hardy & Co., Inc., Jackson, Michigan; Irving M. Tuteur, vice-president, McJunkin Advertising Co., Chicago, Ill.

New Portfolio of Utility Ads Is Now Available

THE new portfolio of public utility advertising, issued by the Public Utilities Advertising Association, is now available at $10.00 a copy. Orders for copies should be addressed to D. M. Mackie, Allied Power & Light Co., Jackson, Mich.

In the 168 pages of this book are given reproductions of 650 of the best public utility advertisements of the past year. The prize-winning advertisements of the nation-wide, better-copy contest held recently are included.

G. E. Harris Heads Brooklyn Display Department

GAS appliances are representative of modern industry and they permit free swing for an artist's theories of design along modern lines, says George E. Harris, who has joined the staff of The Brooklyn Union Gas Company as chief of its window display department.

Mr. Harris has had considerable experience in illustrating, portraiture, and figure painting in general. His work has been exhibited at the National Academy of Design, the New York Water Color Society and the Artists Fund Society. His display work in Brooklyn is attracting considerable attention.

Safety Council Offers Medal to Heroes

APPLICATIONS already have been received for the President's Medal, offered by the National Safety Council, to heroes who successfully restore consciousness to persons overcome by drowning, gas or carbon monoxide poisoning, or electrical shock.

The only folks not eligible to receive the national council's medal are those who have been awarded similar recognition by the American Gas Association or the National Electric Light Association or other resuscitation presentations.

The President's medal

The Utilities As a Field for Investment

A Discussion of Some Fundamentals Which Make the Purchase of Utility Securities Desirable

By SAMUEL INSULL
President, The Peoples Gas Light and Coke Co., Chicago, Ill.

MR. INSULL presented the talk given here during the Halsey, Stuart & Co. radio hour on July 19. A nation-wide hook-up of stations was used, and without doubt many of the readers of the Monthly heard Mr. Insull when he addressed his invisible audience.

Several paragraphs giving figures showing the growth of the electric, electric railway, and the telephone industries have been abstracted from Mr. Insull's speech.

This address has been copyrighted by Halsey, Stuart & Co.—Editor.

DISCUSSION of this subject may be clarified by telling you something of what public utilities are and what they do. But first let us make sure of understanding one another when the words "public utilities" or "public utility industry" are used.

A public utility is a business enterprise, almost invariably a corporation, that supplies an essential service to the general public.

In the broadest sense, the steam railroads and all other transportation agencies, the telegraph lines, water systems, public warehouses, and some other classes of business, would be included in "the public utility industry." But in common usage the words "public utility industry" are taken to mean the businesses that supply electric light and power, gas, telephone, and local or interurban transportation services.

This industry, as it stands today, is the development of less than half a century.

There was gas service more than 100 years ago, but only for lighting. The present all-important fuel function of gas has been developed almost entirely within 35 years.

Young as it is, this public utility industry, as represented by its four main branches, has come to be the very largest industry in the country after agriculture and steam railroads. The development of it in America has been a marvel of the age. For there is now, generally speaking, more and better public utility service in the United States, and it is available to more of the population at less cost, than you will find anywhere else in the world.

American initiative, energy and business enterprise have made this development. It exists largely because American policy, up to this time, has encouraged individual enterprise, with a minimum of governmental interference and competition.

The physical, industrial and financial importance of the industry can be stated only in figures, although the figures are so large as to be almost beyond human comprehension.

Practically everybody in the country makes use of one or more of these public utility services. And use of them grows by leaps and bounds.

The manufactured gas companies have fifteen million regular customers, who use annually nearly five hundred billion cubic feet of gas, an increase of about 200 per cent in ten years. Natural gas companies handle more than twice that.

Upwards of a million persons are employed by these public utilities to make sure that you millions of customers have electric, gas, telephone and street car service whenever you want it, night and day. And practically every customer and every worker represents a family.

The capital investment required for these services in the United States—the cold cash put into land and buildings and machinery and lines and other physical property and equipment—now amounts to upwards of twenty-two billions of dollars. This property is owned, of course, by the investors in public utility securi-

ties. Obviously, therefore, it is ridiculous to speak of public utilities being "owned" or even controlled by a few "magnates." No conceivable group of "magnates" could provide twenty-two billions of dollars.

The so-called "magnates" are only the managers and operators of the public utilities. And they hold their jobs only so long as they are able to produce two results, namely: (1) satisfactory service to the public, and (2) satisfactory returns to the investor-owner.

There are upwards of five millions of these investor-owners, and they come from all walks of life. Some billions of dollars' worth of utility securities are also held by banks and insurance companies. Hence, practically every one of us who has a bank account or an insurance policy is financially interested in this industry. And again, nearly everyone directly or indirectly represents a family.

No other industry has so many investor-owners; no other has closer contact with so many customers. The public utility industry is thus tied into both the big and the little details of everyday life.

Excepting only food, clothing and shelter, the services supplied by the public utility industry are first amongst fundamental essentials. In our complex civilization, we could not do without them. And by having them so highly developed, we are all enabled to accomplish more of everything we have to do—day by day, whether of work or of play. Productivity of every kind is increased. Therefore, it is no exaggeration to say that the public utility industry, as we have it in this country, is a very important factor in our present-day prosperity.

The significance of all this, in relation to investments, is that it makes for stability. A fundamentally essential industry so tied in with the details of everyday life is not subject to the ups and downs of other forms of business and industry. A further stabilizing influence is the personal interest of so many millions of owner-investors and customers.

This stability is enhanced by state regulation in 46 of the 48 states. Regulatory supervision tends to assure good service to the public. It tends to prevent security-inflation, stock-watering and "wildcatting." It also restricts net earnings to a "reasonable return," but this apparent disadvantage has an advantageous offset. The power to regulate carries with it the obligation to protect, and this principle is well established in the law of the land. It is a function of regulation, therefore, to enable the public utility to earn always a reasonable return for the investor.

Public utility investments have been, generally speaking, among the safest and

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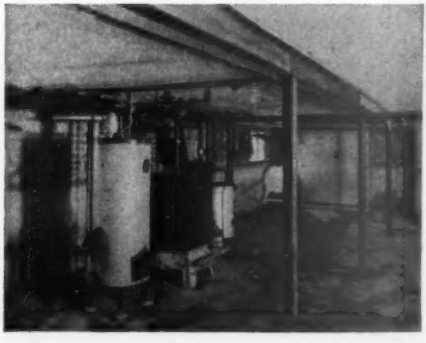


Exterior and basement views of the first Blue Star duplex—the house is in Chicago, Ill.

Analyzing the Industrial Gas Market Survey

What Can Be Found Out and What Can Be Accomplished If the Survey Is Studied

By ELMER B. DUNKAK
C. M. Kemp Manufacturing Co., Baltimore, Md.

THAT the knowledge of the potentialities that a definite market holds for a specific product should form a basis for all planning is generally conceded by sales executives. Regardless of the nature of the product, prices, man power, advertising, and research are all tempered by the findings of the market survey.

It is not the purpose of this article to sell the basic idea of such a study but rather to point out some ways in which the information gathered can be made most useful.

The field work, consisting of the obtaining of all significant data directly from the plants using process heat, is best done by the trained industrial engineers of the gas company. By proper scheduling it is possible to fit this work in with the regular calls.

The treatment of the data gathered in the field consists, in a broad way, of first deducting present operating costs on competitive fuels, including in this deduction such items as labor, spoilage, and equipment maintenance as well as mere fuel cost. A comparison is made with the best existing gas practice using the equipment most suitable to the production of the plant in question. In this manner both gas consumption and rate at which the consumption would be obtainable is computed for each plant in the territory.

It is here that the market analysis commences. Up to now, we have a number of individual surveys each dealing with one plant. By analyzing, classifying, and summarizing, it is possible to so coordinate the collected data that a complete picture of conditions in the territory can be shown readily.

The method described here was worked out for a company operating 24 individual districts in which are located more than 1,000 industrial plants using process heat from fuel other than gas. From the standpoint of supervision of the industrial engineers' activities, it was necessary that each district manager be informed of the local situation in as much detail as the sales executive for the company as a whole.

The first operation, then, was the tabulating of the summarized data for each of the plants, by districts, under the following headings:

1. Name of plant,
2. Industry,
3. Competitive fuel,
4. Heating operation,
5. Estimated gas consumption per month,
6. Rate required to obtain this consumption,
7. Remarks.

From this tabulation the plants having the greatest present possibilities were selected and noted for immediate action.

To give a general picture of possibilities in each district, as well as in the entire territory, a summary showing the potential load at descending rates classified by magnitude of consumption was prepared. This clearly showed what volume of business might be expected at the then existing or any other rate.

Next a comparison by divisions was made between present industrial load and the available load at existing rates. This brought out many interesting points and clearly showed a wide variation in percentage of saturation.

To bring out further the effect of descending rates, a tabulation showing the present load as a percentage of the present load plus available load, at given rates was prepared. These percentages varied from 77.7 per cent on existing rates to

3.2 per cent on the lowest step (10 cents per M).

The volume to which the industrial load might hope to rise was next expressed as a percentage of total gas sales for all classes of business. This was done by dividing the existing industrial load plus the potential at each rate step by the sum of the two plus the remainder of the actual gas sales. This brought out the fact that the industrial load would still represent less than one-half the total load even though rates as low as 30c per M were put into effect. Nothing brings out more clearly the immensity of the existing domestic load.

The foregoing facts were all shown in both table and graph form, and are mainly interesting from the rate angle. Now followed a table interesting to the sales manager in that it deals with manpower and its proper distribution.

It must be remembered that the data sheets showed 77 per cent of the market at existing rates to be already sold. Therefore, it was decided that the protection of the present load warranted an amount of the industrial engineer's time equal to that spent in pursuing new business.

By taking the total industrial fuel consumption and number of plants and dividing by the number of industrial engineers, it was possible to show just how much consumption and how many plants the average industrial man had to care for. The existing rate potential for the whole state was treated similarly to give the average potential per man. With this as a basis each man's territory was set up as to existing load, number of plants, and potential load and compared with the average situation. As a result it was clearly shown where a territory was undermanned or overmanned, and a more logical and equitable arrangement resulted.

To show from which industrial heating operations the potential load is to be obtained, a classification by operations

(Continued on page 510)

BOOK REVIEW

MANUFACTURED GAS—A TEXTBOOK OF AMERICAN PRACTICE, VOLUME II

Reviewed by A. GORDON KING
Service Engineer, American Gas Association

THE second volume of this series by Professor Jerome J. Morgan, of Columbia University, is now available. It will be remembered that in the review of Volume I (A. G. A. MONTHLY, Vol. IX, p. 105) we noted that these volumes were specially prepared as text-book material for use in connection with the Course on Manufactured Gas offered by the Home Study Department of Columbia University under the auspices of the American Gas Association.

This second volume maintains the same high standards set by its author in Volume I, and presents the latest available information not yet reduced to text-book form by any other author on storage, distribution, measurement, and domestic and industrial applications, together with a comprehensive description of new business activities, safety work, rate making, etc.

The sections devoted to domestic and industrial utilization are particularly valuable for the reason that so little textbook material is available on these important parts of a gas company's business.

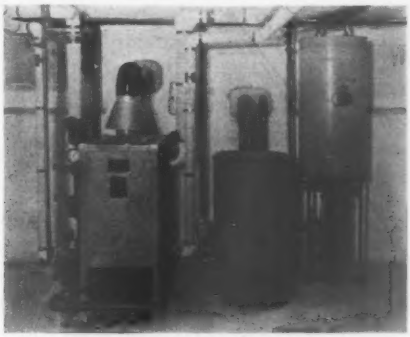
This volume completes a modern American text in a scholarly manner, and withal presents a fundamentally sound engineering and economic viewpoint of an important and ever-growing industry. The author is to be congratulated on the success of his work, and it is recommended that this book be included in the reference library of every gas company for consultation and study by employees.

M. I. T. Industrial Gas Course Is Success

NINETEEN men attended the recent industrial gas course sponsored by the New England Gas Association and the American Gas Association at Massachusetts Institute of Technology.

The course was especially well presented this year, and all attending expressed the opinion that the data gathered would be of untold value to them in their future work.

More than 60 were present at the last day's session, at which time the annual meeting of the Industrial Gas Section of the New England Gas Association was held. F. C. Mackey, chairman of the Industrial Gas Section of the A. G. A., was the feature speaker.



Figs. 1-2: The house and the gas appliances that insure comfort

An Experiment in Gas House Heating

Conducted in Brooklyn, N. Y.

By E. C. UHLIG
Chief Chemist, The Brooklyn Union Gas Co., Brooklyn, N. Y.

This interesting and valuable experiment in gas house heating will be presented in two parts. The second installment will appear in the September issue.

WE have equipped many residences in our territory with gas house heating appliances, but in most of these gas replaced other fuels, and the houses were not designed and constructed solely for the use of gas fuel in a central heating plant, as was the house in which this experiment was carried out.

The purpose of this experiment may be briefly stated in problem form, thus: Given a house thoroughly insulated and guarded against heat losses, for what sum of money could it be heated by gas and how uniform could the room temperature be maintained during the heating season?

The house is located at St. Albans, L. I., New York City. The plot, which is on the corner of two streets, is 50 by 100 ft., the house occupying about 970 sq.ft., the front facing south. It is exposed on all sides, the nearest building being across the street to the west. The design is cottage type, half-timbered, covered with stucco, and roofed with asphalt shingles, in which crushed stone fragments are imbedded.

There are seven rooms. The exposed window glass area, including two sash doors in the large bedroom on the second floor, is as follows: Cellar, 24 sq.ft.; first floor, 104 sq.ft.; second floor, 70 sq.ft.; attic, 15 sq.ft. The total area, exclusive of that of the cellar windows, which was not used in calculating the heating requirements, is 189 sq.ft.

The house is insulated with cork board, nailed to the studding. The sheets are an inch and a half thick on the exterior walls and two inches thick on the attic ceiling. The ceiling of the western end of the living room under the second floor porch is also insulated. Plaster was applied directly to the cork board and found to adhere very well.

Heat losses were minimized also by metal weather strips on all the windows and outside doors. It was first thought that the extent of window glass in the living room—about 59 sq.ft.—would require that outside sashes be put on the north and west windows, but this was not done, and their absence apparently was not felt.

The house is heated by steam from a gas boiler, which has four water sections and

TABLE 1

Date	Time	Place	Floor	Middle	Ceiling	Outdoors	Remarks
1926							
Dec. 14	7:00 P.M.	Living Room—South Side	70	72	74	37	
	7:15 P.M.	Living Room—West Side	72		72	37	
	7:30 P.M.	Living Room—North Side		72	72	37	
	7:40 P.M.	Living Room—North Side		72	72	37	Near radiator
1927							
Jan. 16	11:30 A.M.	Living Room—S. E. Corner	70	72	72	12	Near radiator Heater going
		Living Room—S. W. Corner	64	71	72		Heater going
		Living Room—N. W. Corner	62	70	71		Near radiator
	To	Living Room—N. E. Corner	64	70	72		Heater going
		Living Room—E. Side, Inner Wall	72	74			Heater going
	11:45 A.M.	Living Room—Middle of Room	73	77			Heater going
	12:00 Noon	Bed Room—Second Floor	70	73	72	14	Heater off
	1:00 P.M.	Bed Room—Top Floor	70	72	74	15	Heater starting
	1:15 P.M.	Attic Store Room	70	70	71		No heat in this room, door closed
	1:30 P.M.	Attic—Hall	70	71	72		
	1:45 P.M.	Cellar		60		16	Heater on 11:20 A.M. to 1:10 P.M. N. W. wind

three gas burners, the gas consumption being 240 cu.ft. per hour. The boiler is rated at 525 sq.ft. of heating surface, which includes radiators and steam pipes. It was calculated that 355 sq.ft of steam radiators would be sufficient for heating the house, but as the plans called for 357 sq.ft., and the difference was not great, the radiators were installed according to the latter figure. The steam pipes run through the house inside the partitions.

The heating is controlled by a thermostat, located on an inside partition of the living room near the entrance to that room. It was somewhat difficult to select a place for the thermostat, because consideration had to be given to using the wall space, not interfering with electric lines, and avoiding partitions through which steam pipes passed. The place selected gave a very comfortable, nicely controlled temperature.

The thermostat was set to maintain 70° F. from 7 A.M. to 10:30 P.M. and not to go below 55° F. at any time. It could, however, be set at any temperature above 55° F., which was done whenever the family was out for some hours, in which case 65° F. was the temperature usually selected. Toward the end of the heating season it was customary to set the thermostat at 65° F. at 9 A.M. and back to 70° F. at 7 P.M., thus avoiding the use of gas during warm spring days. The temperature charts indicate generally that in cold weather the house lost heat at the rate of one degree per hour when the boiler was off and gained from four to five deg. per hour when the boiler was working.

A meter was installed to measure the gas used for heating, the gas used for all other household purposes being measured by a separate meter. In addition, a de-

TABLE 2

Date 1926	Temperature Max.	Min.	Av.	Gas B.t.u.	Degree Days	Gas Used Cu.ft.	Percentage of Total	Cost
October						13,000	4.34	$ 14.95
November	65	23	44	541	620	37,600	12.55	43.24
December	49	7	30	544	1,089	64,000	21.38	73.60
1927								
January	51	—1	30	542	1,079	63,500	21.21	73.02
February	56	22	36	542	822	47,800	15.97	54.97
March	72	17	42	540	712	40,700	13.59	46.80
April	88	31	48	538	527	28,100	9.39	32.32
May						4,700	1.57	5.41
Total						299,400	100.00	$344.31

mand meter was placed in tandem with the meter to ascertain the gas burned hourly in the boiler.

The boiler was started on October 18, 1926, and operated until May 18, 1927—seven months. Starting on November 1 the meter was read daily, the time selected being after 10:30 P.M., when the boiler was off for the night. From November 30, 1926, a recording thermometer was used to obtain a temperature record. This was usually placed in the living room near the thermostat, but was occasionally removed to other parts of the house and left for one week in each place. On January 12, 1927, the demand meter was installed and the charts were renewed every few days until May, 1927.

It was found that with this gas-fired steam boiler and the thermostat control a uniform temperature could be kept in all parts of the house as shown in Table 1.

It is common knowledge that the attic in the usual type of house is cold in winter, and to ascertain what effect the insulation would have on the unheated part, the recorder was set in the store-room about two and a half feet from the floor. It was noted that the inside temperature generally rises and falls with the outside temperature, but the rise just before noon is quite marked. This was caused by the effect of the sun shining in the window.

From February 13 to 20, the recording thermometer was on the floor in the dark space under the roof on the east side of the house. The chart shows a more uniform record, the extremes of temperature being between 58° F. and 66° F.

It is a well-known fact that the temperature in the cellar of a house heated by a coal furnace is usually high, rising at times to about 80° F. The gas-fired boiler, being well-insulated, and the gas burning only at intervals, the tendency of the cellar temperature is toward uniformity. The recording thermometer was placed in the cellar in two situations, as follows:

February 6 to 13—Diagonally across the cellar on the south side, about 24 ft.

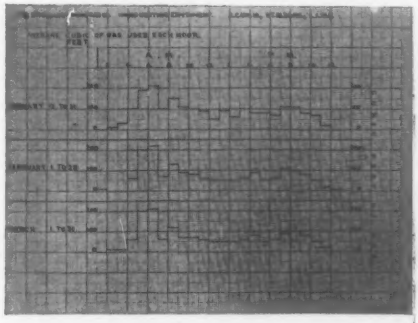


Fig. 3

from the boiler, which is on the north side. The chart shows a very uniform temperature ranging between 60° F. and 67° F. The outside temperature varied from 26° F. to 48° F.

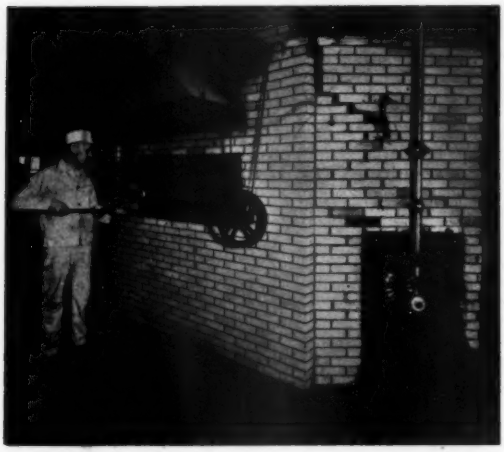
March 14 to 20—On the north side, diagonally behind the boiler, and three feet distant from it. A very uniform temperature ranging between 63° F. and 68° F. was maintained. While the gas was burning, the boiler influenced the cellar temperature but little.

Toward the end of April the rise in the outside temperature naturally requiring less work from the boiler caused a change in our method of control. From April 16 to 20 the thermostat was allowed to function as usual until 7:30 A.M., when it was turned down to 65° F., and at 7 P.M., placed again at 70° F., to heat the house during the evening. After this the practice was to turn the thermostat to 70° F. whenever it was thought necessary.

It was noted that the thermostat control maintained the house temperature at the degree desired, no matter where the recorder was placed.

Everyone is familiar with the great difference of temperature at the floor and near the ceiling in rooms of uninsulated houses. Thermometers were placed at different levels in several rooms, and the temperature differences were found to be very slight, except the floor temperature in the living room on January 16 in the

(Continued on page 508)

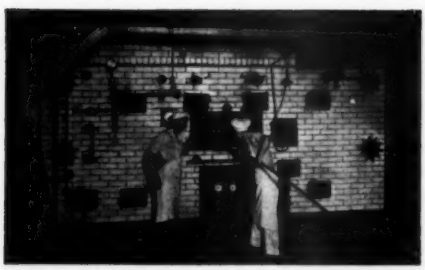


Picture 1

Pictures of Bakeries in Buffalo, N. Y. Where Natural Gas Has Replaced Other Fuels

In the article on the next page the author gives the details of these installations.

Picture 2



Picture 3

Picture 4

Picture 5

Natural Gas Displaces Coal in Bakeries

Description of Five Satisfactory Installations Made in Buffalo, N. Y.

By RAYMOND F. MANN
Industrial Section, Iroquois Gas Corporation, Buffalo, N. Y.

THE Iroquois Gas Corporation has demonstrated to the ample satisfaction of the bakers of Buffalo that successful conversions of their bake ovens can be made from coal or coke firing to gas firing. The accompanying pictures show five different types of ovens that have been converted recently, using two different types of burners.

Figure 1 is that of a 16-ft. rotary oven. The sole product of this oven is pies. All kinds being baked, soft pies, fruit pies, and meringues. The average daily production runs about 1,500 pies. The burner equipment installed consists of two nine-inch tile burners, one in each firing chamber. For the conversion, the grates were first covered with sheet iron, then sheet asbestos, and finally with a layer of firebrick. Two baffles of firebrick, laid checkerfashion, break up the flue gas travel and furnish a bed of radiant heat, so necessary for the best results. The burners receive gas at ordinary line pressure, six inches of water, and are set to deliver a maximum of 400 cu.ft. an hour per burner of 900 B.t.u. mixed gas. Using gas instead of coke, a much more even distribution of heat resulting in a better baked product has been realized, and the owner says that irrespective of the comparative costs, he will use gas in the future. We know, however, that the fuel costs with our gas at sixty cents a thousand and with coke at $10.00 a ton are practically the same.

Two rear-fired ovens with hearths 12 ft. x 14 ft. are shown in Figure 2. The largest part of the output is pumpernickel and other varieties of rye bread for the Jewish trade, although a great variety of goods are baked for two neighborhood stores as well as a wholesale trade. These ovens are fired by six-inch tile burners, one in each firepit (two per oven). A gas pump delivers gas at one pound pressure to the burners, each burner taking a maximum of about 450 cu.ft. an hour. If a low fire is desired, the gas pump is turned off, the regulator arm on the bypass propped up, and then each burner takes about a maximum of 200 cu.ft. an hour at the ordinary line pressure of six inches. Baking is continuous, 24 hours a day. The gas consumption averages approximately 100,000 cu.ft. a month per

oven, costing $60.00. The previous hard coal consumption was about five tons a month, costing $67.50. With coal, the front of the oven ran from 80 to 100 degs. lower in temperature than the rear. On gas, the temperature does not vary more than five degs. in any part of the oven. The case for gas is obvious.

Figure 3 shows a very heavy, brick-flue type of oven, very popular in Buffalo. The one illustrated is front-fired, has a self-contained high pressure steam boiler, with a hearth 12 ft. x 14 ft. in size. Up until a few months ago nothing but solid fuel had ever been used to fire any of the more than fifty ovens of this type installed in Buffalo and it was the prevailing opinion among bakers that gas could not heat this oven satisfactorily. The several conversions that we have made, such as the one shown, have, however, proved extremely successful. Two nine-inch tile burners, placed side by side, fire into the firing chamber against a double baffle of firebrick placed checkerwise. A four-inch burner is placed under the steam boiler to give greater flexibility to the production of steam. Gas at ordinary line pressure (six inches) is supplied. A maximum of about 900 cu.ft. of gas an hour is possible, and one firing of four hours a day is sufficient. Soft coal at $8.00 a ton was formerly used during the week and coke at $10.00 a ton to hold over Sunday. That gas can compete with soft coal at its usual price argues much for the advantages of gas.

Figure 4 shows an oven of the portable type, much lighter than the three previously described. It has two decks, five feet, 6 inches by five feet, and two firing pits. Each pit contains one eight-inch refractory burner, connected by a short one and one-half inch nipple and a one and one-half inch ell to a one and one-half inch drawn steel venturi mixer. The burner proper is set low in the firing chamber, just above the grate line. Soon after lighting, the burner head becomes incandescent, but being of refractory material it should have a life as long as that of the oven lining itself. This feature of great life, as well as the high proportion of radiant heat it furnishes, makes this burner ideal for the portable type of bake oven pictured. Each burner has a maximum capacity of about 150 cu.ft. of gas an hour.

Figure 5 is also of a portable oven. This one, however, has two decks each six feet and two inches wide by six feet and seven inches deep. It is fired by a 10-inch refractory burner in each firepit. These burners are installed as described above, differing only in that the burner head is 10 inches in diameter and the connections including the mixer are two inch. The maximum capacity is about 240 cu.ft. a burner. The outer door on the left is open only for the purposes of making this picture; ordinarily it is closed. This aids considerably in keeping the bakery at a comfortable temperature during the summer months.

These pictures illustrate but five of the more than 100 bakeries in Buffalo entirely gas-fired. All types of ovens and many types of burners are represented. The above, however, show the latest and, to date, the most satisfactory conversion installations.

"Join Your Trade Association" says New York Bank

IN a recent newspaper advertisement, the Equitabe Trust Co. of New York advises all readers to "Join Your Trade Association." The following is taken from the text of the advertisement:

"There are many good reasons why membership in your trade association is a distinct asset. "Not the least is the information which it gathers for its members. For business success, a man must look beyond the confines of his immediate problems and keep abreast of his whole industry."

And why shouldn't every executive make it a duty to see that every man or woman holding important subordinate positions are members?

What Is the Coke Situation Today?

An Analysis of the Problem Based on Four Papers Presented at the Production Conference of the Technical Section

TO answer the question, "What is the coke situation today?" the Program Committee of the Production Conference of the Technical Section arranged a symposium of four papers by qualified men in the gas industry. These papers formed the contribution of the Carbonization Committee to the conference, and will be printed in complete form together with discussion in the annual report of the committee. These four papers have been abstracted, and the information brought out is given here for the benefit of the readers of the MONTHLY.

The economic aspects of the coke situation were presented by Paul Ryan, statistician of the American Gas Association. Mr. Ryan showed that while the total production of coke in 1927 decreased ten per cent, the output of by-product coke decreased only one per cent.

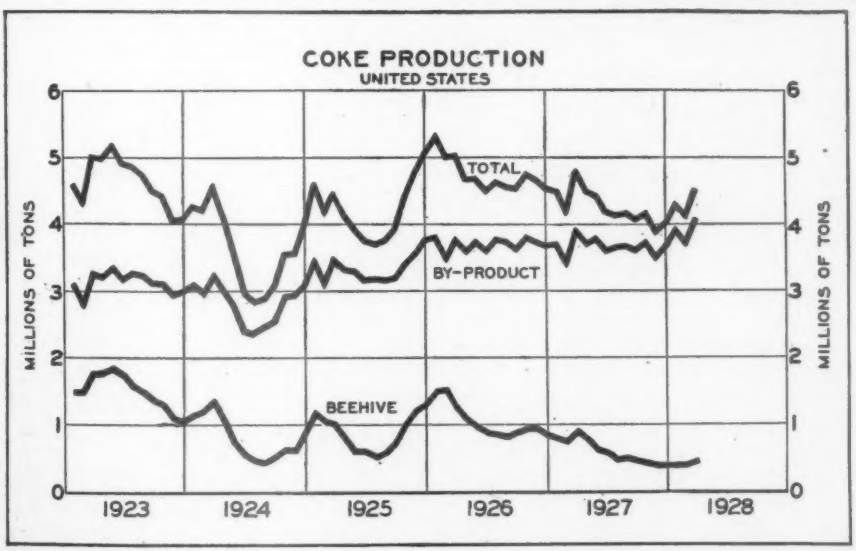
In summarizing developments in the gas industry affecting coke production, Mr. Ryan said:

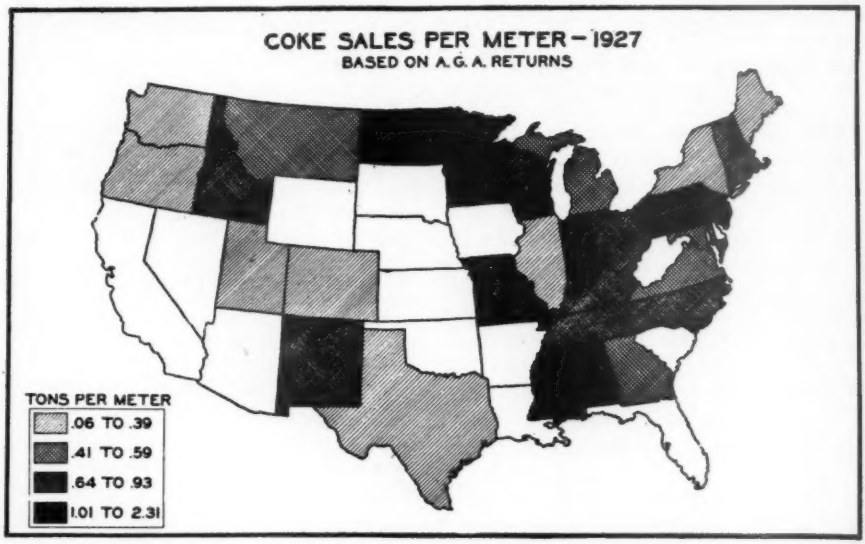
"It is evident that the year 1927 witnessed a pronounced trend for the substitution of coal gas for water gas. The question then presents itself as to the utilization and disposal of the additional coke presumably available from increased coal gas production.

"To throw some light on these factors, and more particularly to obtain some measure of the intensity of development of the local coke markets, the A. G. A. Statistical Department analyzed the reports of some 175 manufactured gas companies engaged in coke merchandising. For each of these companies there was set up individually the ratio of annual coke sales per domestic meter and per capita served.

"The accompanying charts were prepared from averages of the total coke sales, meters and population reported for each state to the American Gas Association. While these averages display in a rough way the sections and states characterized by relatively high coke sales, like all averages they suffer from the possibility of being misleading, owing to the predominating influence of one or two extreme or abnormal situations and while the variations in the averages between various states are marked, there are equally marked variations concealed under the averages for almost every state.

"Attempting to generalize, it may be stated, despite numerous exceptions, companies with



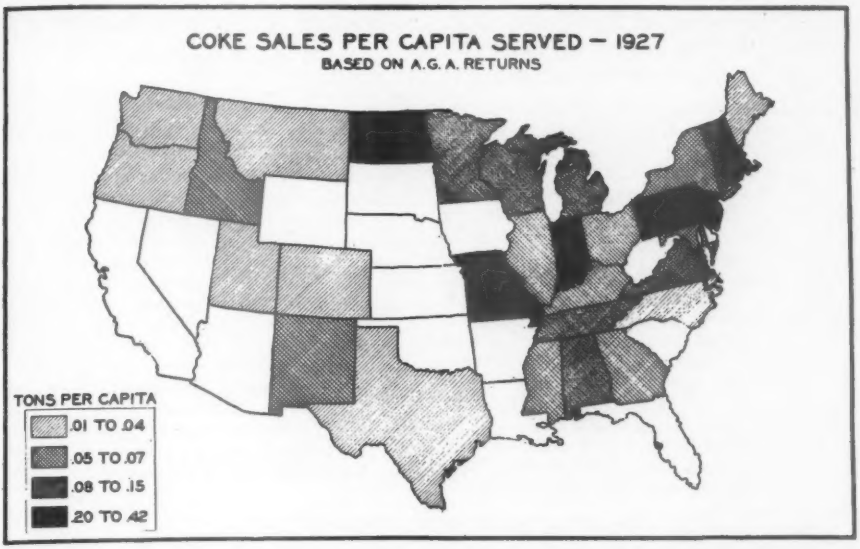


a low ratio of coke sales are usually those where water gas constitutes a large percentage of the total gas made, and conversely, where the ratio of coke sales is high, the percentage of water gas to the total make is either small or absent entirely. At first glance it might appear that the answer to high or low coke sales was merely a question of high or low water gas production. A study of the extent to which plants were utilizing installed capacity should serve to dispel such an idea, for it will be observed that many of the same companies showing a large percentage of water gas production have coal gas plants operating far below their rated capacity. That is, instead of large water gas production being an answer to low coke sales, an additional question arises as to why so much water gas was produced in the first place when, in many instances, the coal gas plants were being operated so far below capacity."

Mr. Ryan mentioned a study of other data throwing light on this situation. Therein he showed for each situation the percentage of total coke produced which was used as generator fuel for water gas, the per cent used as bench fuel, the per cent available for sale and the per cent sold, together with the per cent used for boiler fuel.

He continued: "Again attempting to generalize, in spite of numerous exceptions, it may be stated that most of the companies with low coke sales not only used a large proportion of the coke produced as a generator fuel for water gas, but usually showed a fairly large spread between the per cent of coke available for sale and the per cent sold, many of the companies in this group of low coke sales using as much as 15 and 20, and in a few cases even as high as 30 per cent of the coke produced as fuel under the boiler. Granting that some of this coke may have been so badly crushed as to be unfit for other uses, this is not so much an explanation of low coke sales as an indictment of coke handling and methods of preparation used in these particular cases.

"At the other extreme, consider the companies with high coke sales making small amounts of water gas or none at all. Their coal gas plants are operated at a high percentage of their rated capacity, using water gas capacity a small portion of the time to ease them over the peaks of their annual load curve. The percentage of coke produced which is used in generating water gas is small or entirely lacking. The per cent used as bench fuel runs about the same, except for some of the by-product coke oven plants, where the percentage of bench fuel used is materially less. The spread between per cent of coke available for sale and per cent sold is much smaller. For this group of companies with high coke sales the percentage of coke used as boiler fuel seldom exceeded nine or ten per cent and was usually lower, al-



though even here there were instances where companies were producing more coke than could be disposed of, and were adding to stocks or burning larger amounts as boiler fuel.

"In general, it would appear that during 1927, sales of coke by most of the companies included in this analysis were somewhat less than the amounts available for sale, and that stocks of coke increased accordingly. This may be partly explained, of course, by the lower levels of industrial activity, declining fuel prices, the trend from water gas to coal gas production, and the unusually mild weather prevailing throughout most of 1927.

"What these factors do not explain, however, is the marked contrast existing in general over all conditions between the group of plants with low coke sales and the group showing high sales per meter and per capita. For this latter group does begin to approximate what has been pictured as the gas industry of the future. *The intensive development of their coke markets has in fact permitted them to carry their base load on coal gas plants operating at high efficiency throughout most of the year.*

"For the group with low coke sales, the conclusion seems warranted that the undeveloped condition of the coke market has had unfavorable repercussions all along the line, large quantities of the unsold coke being used in the plant for generating water gas or other uses, leaving the coal gas plants which should be the lowest cost producers operating far below capacity.

"In other words, it is undeveloped coke markets that prevent for large numbers of manufactured gas companies a fuller realization of the benefits and economies to be obtained from more complete utilization of existing coal gas capacity, and the use of additional capacity for the manufacture of coal gas on a large scale.

"It would hardly be an exaggeration to conclude, therefore, that the problem of coke merchandising is one of the most important, if not the most important single problem now confronting the manufactured gas industry. For the problem involves a change in viewpoint for many of the companies engaged in the distribution of coke. Some of the experts who devote most of their working days to a study of modern merchandising methods and policies maintain that every sound merchandising plan must begin with the consumer, with a study of his needs and requirements and the buying motives which must be stimulated to secure sales results. This means that coke cannot be forced on the customer through mere price reductions, but rather that he must be educated and stimulated through the various stages of consumer recognition, consumer interest, up to the point of consumer preference. Then other things being favorable, he will ask for and demand the coke which is available for sale and which must be sold in ever-increasing amounts if the industry is to realize to the full the great opportunities for public service and usefulness which lie before it."

L. E. Knowlton, of Providence, R. I., presented the coke preparation side of the discussion. In part he said:

"In order to find a ready market in competition with other domestic fuels, coke must be carefully prepared. The highest grade domestic coke should have a low ash content and a high ash fusion temperature and should be well-sized. All coke to be marketed in any given locality should be of uniform density and cell structure.

"Ash content and ash fusion temperature in the coke are dependent on the corresponding characteristics in the coal carbonized to produce the coke. The production of a high grade coke is then first of all affected by the coal processed. Low ash content in coke is desirable as a selling point in contrast with other solid fuels of higher ash content. High fusion temperature of ash with resulting freedom from clinkers introduces an advantage in its use which the domestic consumer quickly appreciates.

"Cokes of various densities and structures are successfully marketed in various localities and all seem to secure satisfied customers. Substitution of relatively light for relatively dense coke or *vice versa* in any one local market, however, produces confusion and subsequent dissatisfaction on the part of the average user. Control of combustion is enough of a problem for the ordinary citizen without the futher complication of a different scheme of draft regulation for each new delivery of fuel. In general, in the eastern part of the United States, where the principal competition is with anthracite, a relatively dense and slow burning coke probably meets with the least sales resistance, because it most nearly approaches the combustion characteristics of anthracite."

Mr. Knowlton said that the principal opportunity of the average operator for control of quality of coke is in the sizing. The number of sizes and the range within any named size will vary in different localities, and plants must adapt its sizing to the market or create a demand for the sizes it chooses to produce. Mr. Knowlton stated the presence of dust in coke that is otherwise well-sized will prove a source of complaint from the customers. He also said:

"One difficulty that arises in the preparation of domestic coke is to produce the right proportion of each size to meet the particular demand for it."

(Continued on page 507)

Further Work in Cooperating with A. S. of H. & V. E.

FOLLOWING the meetings held in Philadelphia at the Convention of the Heating and Piping Contractors National Association in June, a meeting was held of the Publication Committee of the Guide of the American Society of Heating and Ventilating Engineers.

In conjunction with representatives from the Heating and Piping Contractors National Association, the insulation manufacturers, and the American Gas Association, it was decided that the first chapter of the Guide containing the heat transmission data should be reprinted without change, say for minor corrections, in the 1929 edition of the Guide.

However, successful arrangements have been made to continue the cooperative work and to print in the 1930 edition of the Guide the results of the cooperative committee between the three organizations mentioned.

Johns Hopkins Graduate Joins Laboratory Staff

WILBERT J. HUFF, professor, gas engineering, The Johns Hopkins University, Baltimore, Maryland, has announced that R. Carroll Albrecht, a graduate in gas engineering at the University in 1928, has accepted a position with the Testing Laboratory of the American Gas Association in Cleveland, Ohio.

It was announced recently that Raymond M. Finn, also a graduate in gas engineering in 1928, had accepted a position with the Laboratory. This was an error, as Mr. Finn has joined the staff of the Maryland Plant of the Bethlehem Steel Company.

When hot water is appreciated—a window display of the Providence, R. I., Gas Co.

Proper Range Selling Builds the Domestic Cooking Load

PREPARED FROM INFORMATION SUPPLIED BY J. T. HAMMACK, THE LACLEDE GAS LIGHT CO., ST. LOUIS, MO., TO THE SUBCOMMITTEE ON PUBLICITY OF THE DOMESTIC RANGE COMMITTEE, COMMERCIAL SECTION

IT is well known that the gas industry is in serious danger of losing a major part of its domestic business. We are now taking steps to meet this situation by stimulating a greater use of gas for domestic purposes. Effective range-selling offers one of the best means for accomplishing this desired end.

For maximum sales results sell the service the gas range renders, rather than the range itself

When a range is sold in the proper way the customer's attention is directed toward the new cooking processes made possible by the improved modern gas range, such as broiling and baking with heat controls, and the purchase is founded on these features. In such a transaction, the housewife is purchasing not the appliance but the duties it will perform for her.

Obviously, no customer deliberately wishes to increase the gas consumption on an appliance. On the other hand, means are now being employed to reduce it. Cooking devices which prepare an entire meal over one burner are purchased in great quantities in the belief that they will reduce gas consumption. While gas companies should and do at all times show a willingness to cooperate with the customer in the economic use of a range, it is still more to the advantage of the gas company to show the customer how the continued use of the gas range will cut down living expenses, through home cooking. Further, how many of the people purchasing the cooking devices mentioned above know that the modern gas range is equipped with a temperature controlled oven and realize the economies effected by its use?

FACTORS AFFECTING RANGE SALES

It is true that there are some apparently feasible reasons why customers do not always show interest in new gas ranges. Some have become so accustomed to the operation of the old one that they do not desire a change. Many are not interested in improving the appearance of the kitchen with a new range, due, perhaps, to a lack of domestic pride. Others wish to continue using the old range until it is financially convenient to modernize the entire kitchen, getting a colored range that will harmonize with the other fixtures and the decoration of the kitchen itself.

The comfort, convenience, and greater ease and accuracy of the modern appliance should dwarf any of the above factors. Women who have grown accustomed to the operation of an old range usually have set methods for preparing certain foods which they always use, perhaps because they are frequently desired by the members of the family. These women can be shown how the old methods may be utilized in a more satisfactory way with a new range. Regardless of the housewife's ability as a cook, she will not be careless about the amount of ingredients necessary for baking a cake, but very carefully measures them

in order to obtain the best results. Is it not bordering on the ridiculous then, after such scientific precision in the measurement of the batter, to guess at the temperature of the oven?

The improvement in the broiler also makes for better cooking processes, and regulated temperature will help in increasing its use.

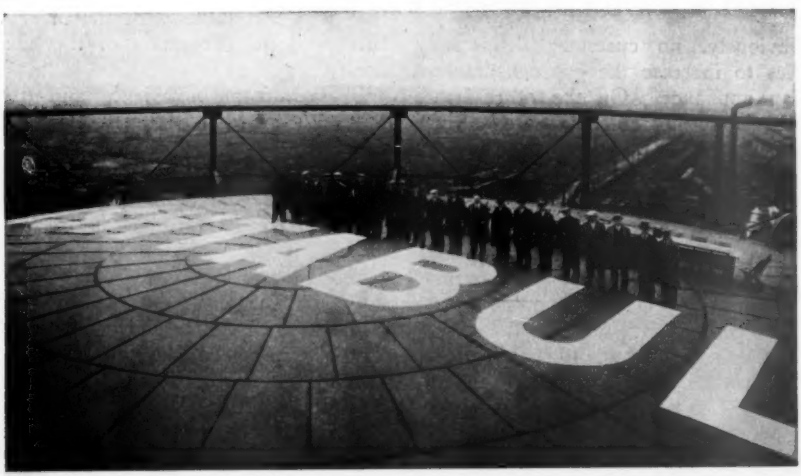
The construction and design of the modern range makes it more convenient in many respects. Cabinet ranges have been displacing the square type ranges in the past few years because of the convenient working space the larger shelves afford. All porcelain ranges, including oven linings, are very easy to clean and will not discolor from ordinary use. More space is now provided under the range to facilitate cleaning the floor underneath, without having the surface burners placed too far from the floor. Concealed oven-door hinges and boltless fronts make the range more sanitary, easier to clean, and adds greatly to its appearance.

We all know the way retail merchants will run an attractive sale on one article merely to bring customers into the store. The gas range may be used in a similar way, without the expense of a special sale. Many customers come into the gas company store to purchase gas ranges. If they are shown the advantages of other gas-fired appliances at the same time, sales are made which would otherwise probably never come about. The universal use of gas ranges makes it possible to use them for building up confidence in other appliances.

The gas range is a prominent appliance in the kitchen, and is perhaps the first thing one notices when entering the room. If it were displaced by one using another fuel, even though there were other appliances in the basement using gas, the observer would very likely carry away the impression that gas was not used for any purpose in that home.

One of the best means for bringing the features outlined above to the attention of the customer is through the salesman. If the sale is made on the basis of these important points, it is easy to show him the particular range to suit his needs, in view of the diversity of models, the many different sizes, semi and all porcelain, and a variety of color schemes now available.

Sell the customer what the gas range will do rather than a mere piece of equipment.



On the top of the Lake Shore Gas Company's (Associated Gas & Electric System) holder

Aspects of Public Utility Merchandising

A Thorough and Detailed Review of the Principles of Merchandising Activities

By M. W. WALSH
Merchandise Manager, The Connecticut Light and Power Co.

This is the second part of a paper presented by the author at the recent U. G. I. Annual Conference. The first part appeared in the July issue of the MONTHLY.*—Editor.*

THE merchandise selected should be of a high standard. The reputation of a company depends upon the satisfaction that results from the use of appliances just as it does upon the maintenance of continuous service. It would take very little imagination to know the reaction from our customers if the gas or the electric service were interrupted several times during a month. This same reaction results if appliances, by which the commodity is utilized, fail to give satisfactory service. When the utility company selects its merchandise on a quality basis there is a tendency toward maintaining a higher standard of appliances in the stores of other retailers.

Merchandise that is nationally known will require less effort to introduce and sell to our customers and, therefore, should be selected. However, there are occasions where appliances of merit, although not having widespread reputation, can be obtained from manufacturers located within the territory served by the company. Since the utility company is a community institution, it may often be of advantage to patronize home industry, if the circumstances warrant.

The sales possibilities for appliances, which have been generally accepted by the public, are always at a high level. New business promotion allowances should be provided to introduce, through the means of educational programs, those appliances which have not been so well established. This involves a considerable expense, the burden of which should not fall entirely upon the merchandising activity. Many appliances are not good merchandising propositions because of their low net merchandise return, but at the same time have a high load-building value.

The best practical example of the company's faith in the appliances it sells is the extensive use of those appliances by the company's employees. The employees should support the company by the liberal use of appliances in their homes and the company should recognize the situation and grant the employees liberal terms and special prices on the appliances purchased.

LOCATION

The office of the company should be located so as to be convenient for the customers to transact their business. If centrally located and easily accessible, there will be a tendency to multiply the visits of the customers.

By proper store location the company can, through its show windows and its store display, attract buyers who might otherwise spend their dollar elsewhere. Statistics show that 95 per cent of the purchasers for the home are either made or influenced by the woman. Window and store shopping in the busy centers is a characteristic "hobby" of women throughout the country and it can readily be seen that much can be gained in sales volume if the wares of the public utility are placed for ready inspection by the women, who comprise the bulk of the shopping trade.

It may not be out of order at this time to point out the significance of the appearance and atmosphere that should prevail in the salesroom. The attractive arrangement of the merchandise is important. Goods well displayed help to sell themselves.

The sales room should be more than a

place to pay bills. Herein lies an opportunity to convey a definite impression of the many ways in which gas and electricity can be of benefit in the customer's home; a desire in the minds of the customer to take fuller advantage of all the service that gas and electricity can bring to him.

Personal contact with customers takes place in the store as well as in the home. Warmth, welcome and courtesy should greet the customers when they enter, regardless of their missions. This attitude builds good will and is a step forward to better public relations.

APPLIANCE SELLING IN GENERAL

In selling the appliance to the customer the public utility has a two-fold purpose in view. First is the obligation to increase the service to the customer and second to build up the load on the company's lines. This requires a systematic sales program, devised to meet the needs of the people in the entire field served by the company.

The selling plan must take into consideration the keen competition for the customer's dollar. The public utility is, by virtue of its beneficial service to the customer, entitled to a certain share of this dollar, but it can secure it only by convincing the customers that a dollar spent for electric and gas service is a dollar spent for desirable comfort and convenience. It has been proven that this can be accomplished in the greatest degree by sending our salesmen into the homes of our customers.

Proper selling of the utilization of gas and electric appliances is a big step toward influencing the customer to spend wisely. Sometimes the result is a transfer of the customer's intended expenditure from one industry to another rather than an addition to his budget. For example, we find substitution of gas for coal to heat the home, gas for coal or oil to do cooking, and mechanical refrigeration for the cake-of-ice method.

There has been much discussion regarding the method to be used in covering a territory, whether it be by territory men, specialty men, or both. From a public utility standpoint we believe it is much better to divide the territory into sections, allocating from 1500 to 2000 customers to each section covered by a representative who will sell the general line of merchandise. The specialty man covers the entire field served by the company, working at times exclusively by himself and on numerous occasions aiding the territory man. The importance of close cooperation between the territory men and the specialty men is vital to the successful operation of such a program.

It is desirable to develop a steady flow of business throughout the year as this stabilizes the entire organization. The variety of gas and electric appliances and the numerous applications of our service make this possible.

There may be profitably interspersed a reasonable number of special campaigns, chiefly those of a seasonable nature. If these are wisely conducted they will aid materially in keeping the sales curve of the entire line of appliances always on the rise. The great amount of national advertising, supplemented by local advertising and the coordinated activities of the sales people, turns the thoughts of the public toward the gas and electric industries and therein lies an opportunity for us to take advantage of the situation. However, the many undesirable features that prevail in campaign selling should be eliminated. The inducements usually necessary in campaign selling may well be the kind that will not injure the general sales program. List prices should be maintained. Special easy terms or premiums in the form of devices that consume gas and electricity can harmlessly and often profitably be worked into the campaign program.

When premiums are offered it is best to feature the combined value of the appliance and the premium, together with the saving afforded by the campaign

prices. This campaign price comprises the regular list price of the appliance and any portion of the cost of the premium that the company wishes to include. For example, a $12 appliance and a $3 premium shows a $15 value. The campaign offer is $12.50, a saving of $2.50. The saving is on the premium and not the appliance, the price of which is always maintained at list.

ADVERTISING

Utility advertising consists of both good will and merchandising copy and if wisely directed will build friends and create sales. There is perhaps no definite formula whereby it can be determined exactly how much of the work of developing sales can be performed by advertising and how much is left for salesmen to accomplish. Good advertising, however, can be depended upon to do much of the missionary or advance sales work. This preliminary informative work can be effectively accomplished at much less expense through the various mediums of advertising than by salesmen.

Many utilities advertise only when inaugurating a campaign or conducting an intensive sales activity. For a utility to discontinue periodically the use of advertising is the same as an engineer permitting his fire to go out. It is better and more economical to keep steam up with a continuous program of advertising rather than to use a spasmodic method, which is less productive and more expensive.

The amount of money expended each year by a fair-sized utility justifies the employment of a publicity manager to supervise the channels into which the appropriation is to flow and the methods to be employed. Many companies set up an appropriation only to have it unwisely expended according to recommendations offered by every advertising or space salesman calling on the company. An experienced advertising manager can often reduce the appropriation and by wisely directing the expenditures obtain satisfactory results.

In addition to supervision of advertising copy prepared for newspapers, direct mail use, bill enclosures, employees' envelope inserts, etc., and the schedules pertaining to the use of these forms, the advertising manager and his department should have control over other forms of publicity that have a decided effect on the sale of merchandise or the promotion of good will. The appearance of show windows and store displays and the salesrooms in general, all of which can build or retard sales, should come within the scope of the advertising department's responsibilities.

CREDIT

Practically all retail merchandise offered for sale today can be bought without paying cash. Any business, selling merchandise, can adjust its sales activities to this condition by establishing and operating a credit system on a sensible basis.

Whenever there is any doubt of approving credit for a customer, a careful study should be made before a definite decision is reached. If the credit is not approved, the sales department should be provided with detailed information of the circumstances governing the disapproval. Since the sales department opened the negotiations with the customer, it is the logical channel through which the customer should be advised of his credit standing.

It may be good business for the public utility to assume a liberal attitude on credits pertaining to the sale of its appliances due to the fact that these appliances are a source of added revenue when placed on the lines.

It is obvious that a very liberal credit policy will increase the number of credit risks, but it will also increase the volume of appliance sales, resulting in added load on the company's lines. The revenue derived from the added load may far outbalance any losses incurred because of a liberal credit system.

TIME PAYMENTS

Perhaps nothing else has contributed as much to increase the volume of sales of all retail merchandise as time payments. The public utility should recognize the possibilities of developing its merchandising business by the adoption of a time payment plan which will enable its customers to purchase gas and electric appliances easily. However, careful judgment should be exercised to make sure that this plan contains ample protective measures for the company.

In a business such as ours where the merchandise comprises many articles of widely different values and utility, a payment plan that is flexible so that it can be adjusted to the article sold is most desirable.

Examples of the need for this flexibility are shown herewith:

A self-action gas water heater installed in a customer's residence should be sold on a longer time payment basis than a hotplate sold to a customer doing light housekeeping.

Merchandise of a perishable character, such as colored lamp shades, should be sold on a short time basis.

All appliances should be classified in groups on the above basis and the proper initial and time payments applied to each group.

The customers have always realized the extent to which they are benefited by the time payment plan of purchase. They have accepted, without complaint, the idea that they should, to some reasonable degree, pay for the privilege of buying on an extended time payment basis. Several methods are used among retailers in determining the amount of this obligation on the part of the customer, variations being usually influenced by the character of the merchandise and the class of trade involved.

Many suggestions have been made in the attempt to produce a method that is fair alike in all respects to the customer and to the company. Any plan that does not protect the rightful profits of the company cannot be considered consistent with sound business principles. One may call attention here to the plan commonly used where the carrying charge is figured from the amount of money involved in the purchase, this being added to the price of the article and the whole amount divided into payments extended over a stated period. No provision is provided in such a plan to protect the company from the losses incurred when the customers fail to conclude their payments within the specified time period. Further study will disclose the fact that even if the customer does pay all installments within the time limit, a loss is incurred if any of the payments due are allowed to become delinquent at any time during the period the plan is in effect.

Perhaps the answer to the problem lies in a method that permits the customer to use more fully his judgment as to what action he should take in clearing his debt. If his delinquency will be costly to him, he is more likely to make added effort to meet his obligations. A fixed charge may be applied monthly, the amount of this charge being figured along the lines of the following formula:

Principle

20 cents a month per $25 on sales up to and including $75.00

15 cents a month per $25 on sales over $75.00

Formula:

Divide Cash price by $25 to determine number of $25.00 multiples

Ignore remainder—add 1 and multiply by 15 cents

E. G. Price $145.00

$145.00 ÷ 25 = 5 + 1 = 6 × .15 = $.90 — the monthly carrying charge.

Emphasis should be placed on the point that this monthly carrying charge is an obligation of the customer which is incurred during each month until the final payment is made.

This method may also include a provision whereby the customer is allowed to choose the length of his contract from a group of schedules drawn up on 6-8—10-12 and 18 months period. Such an arrangement would amplify the advan-

It is claimed that this oven, located in Germany, is the largest gas-fired bake oven in the world

tage of accepting the shorter term schedule which often may be selected by the customer, meaning a saving to him and a benefit to the company.

COLLECTIONS

Emphasis should be made on the importance that should be attached to collection work, especially because it involves personal contact with the customer and is obviously of a nature that if not tactfully handled will very easily lead to undesirable circumstances.

If it is gracefully, yet firmly, impressed on the customer at the time a sale is made that the company is exceedingly liberal in allowing time payments to be placed at a conveniently low figure to make it easy for the customer to pay, it also necessarily maintains a rigid policy as regards the regularity with which those payments are to be made.

When sales people are stressing the idea of how easy it is to buy an appliance, it is quite possible to create in the minds of purchasers the impression that the company isn't very particular about getting its money quickly as long as it succeeds in closing the sale. So it probably often follows that when payment is due some customers feel that no great concern will be felt if payments are not made promptly and regularly. If all sales were consumated with a full understanding by the customers that the scale of payments granted them is based on a definite period of time in which all of those payments are to be made, it is quite logical to believe the situation would be improved.

No plan has ever been devised, it seems, that will eliminate entirely the necessity for a certain amount of collection work. As pointed out before, this brings the customers and the company in personal contact, and the attitude of our representative and his intelligence must be of an order that will improve the situation and not make it worse, both from the standpoint of the customers and also that of the company. Careful handling of this branch of a merchandising system will aid in keeping the appliances on the lines, thus minimizing the amount of reverted merchandise and at the same time preventing the loss of good will.

In cases where merchandise is repossessed for non-payment and return to

(Continued on page 509)

A. G. A. Annual Exhibition Will Break Records

THE exhibition of appliances and equipment to be held in conjunction with the tenth annual convention of the American Gas Association, Atlantic City, N. J., October 8-12, will be the largest on record. Already more space has been sold to exhibitors than was used for the 1926 show, and there is still two months before the exhibition opens.

Manufacturers who desire to exhibit are requested to write C. W. Berghorn, director of exhibits, American Gas Association, 420 Lexington Ave., New York, N. Y., promptly.

The following manufacturers have taken space since the preliminary list was published in the July issue of the MONTHLY:

Acme Flue, Inc.
American Heater Corp.
Automatic File & Index Co.
Austin Machinery Corp.
Barstow Stove Co.
Burgess-Parr Co.
Celotex Co.
Collier Gas Heating Co.
Copeland-Silica Gel Corp.
Crandall Pettee Co.
Crane Co.
Crown Stove Works.
General Ceramics Co.
Hays Mfg. Co.
W. C. Holmes & Co., Ltd.
C. W. Hunt Co.
Kitson Co.
A. J. Lindemann & Hoverson Co.
Magee Sales Co.
Methudy Enamel Range Co.
Riter-Conley Co.
Shallcross Control Systems Co.
Sweet & Doyle Foundry & Machine Co.
Troop Water Heater Co.

51 Attend Industrial Course at Illinois

THIRTY-THREE gas companies sent fifty-one men to the recent industrial gas engineering course held at the University of Illinois by the Illinois Gas Association.

A well-rounded program of important subjects was offered the students. Among the high spots was a lecture by Dr. T. E. Layng on "What the Industrial Gas Engineer Needs to Know about Combustion." J. E. Hansen talked on vitreous enameling, and Prof. Hursh gave a lecture on firing brick. Glass melting was discussed by G. W. Akerlow.

W. M. Hepburn presented an especially fine lecture on forging, and this was followed by a discussion of low temperature industrial gas problems. R. G. Guthrie lectured on metallurgical problems, and also on "Problems the Industrial Gas Salesman is Confronted with in Actual Field Work."

The subject of temperature control was covered by Prof. A. I. Andrews, and M. I. Mix took up the problem of meters. Refrigeration was the subject assigned to John Walsh, and volume water heating to C. H. Light.

"Problems in Food Products," was presented by E. G. deCoriolis. John F. Weedon gave an excellent talk on the subject of advertising.

Other interesting high spots on the program were:

"Hotels and Restaurants," by T. J. Gallagher; "Servicing Industrial Gas Equipment," by W. F. Miller; "House Heating Estimating," by Glen C. Carnahan; "Water vs. Steam Heating," by Prof. W. H. Stevens; "Warm Air Heating," by G. B. Shawn; "House Heating," by H. B. Johns; and "Selling House Heating," by L. C. Harvey.

A discussion on insulation was also conducted by Messrs. Carnahan, Johns, and Layng.

Members of the A. G. A. Headquarters' Staff were recently taught the prone pressure method of resuscitation by instructors from the Consolidated Gas Co. of N. Y. At the left Alexander Forward, managing director, is learning the method, with K. R. Boyes, secretary, playing the part of victim

Photographs showing progress made in erection of new A. G. A. Testing Laboratory building at Cleveland, Ohio

George E. Whitwell Is Appointed Member of Laboratory Managing Committee

Brings Varied and Wide Experience in Utilization and Sales in Manufactured and Natural Gas Fields

G. E. Whitwell

GEORGE E. WHITWELL, manager of sales and service of The Philadelphia Co., Pittsburgh, Pa., has been appointed a member of the A. G. A. Testing Laboratory Managing Committee, according to official announcement by Oscar H. Fogg, President of the American Gas Association.

The industry should regard Mr. Whitwell's appointment as one of the most important made in the history of the Laboratory, Col. Fogg said.

"Special emphasis should be attached to the fact that Mr. Whitwell is an outstanding commercial man who has also had extensive experience in the utilization end of the gas business," Mr. Fogg continued. "His activities have included both the manufactured and natural gas fields, and the experience he brings to the councils of the Laboratory Managing Committee will be broad and valuable."

Mr. Whitwell was formerly engineer of utilization for the Tacoma Gas and Fuel Co., Tacoma, Wash., and later had general supervision of the gas properties of the H. M. Byllesby Co. He also had sales supervisory experience at Tacoma, and with Byllesby. He now is general sales manager in Pittsburgh.

Other members of the Laboratory Managing Committee, which supervises the testing activities of the A. G. A. Testing Laboratory, are:

R. W. Gallagher, *chairman*, The East Ohio Gas Co., Cleveland, Ohio.

A. H. Hall, Central Union Gas Co., New York, N. Y.

J. S. DeHart, Jr., Isbell-Porter Co., Newark, N. J.

R. B. Harper, The Peoples Gas Light and Coke Co., Chicago, Ill.

N. T. Sellman, Consolidated Gas Company of New York, New York, N. Y.

R. M. Conner, *Director*, A. G. A. Testing Laboratory, Cleveland, Ohio.

Start Work on Wichita to Ottawa Extension

CONSTRUCTION has started on the 32 mile extension of Cities Service Gas Company's 20" natural gas pipeline to bring natural gas from Texas Panhandle to the natural gas markets of Kansas and Missouri. The contract for the construction of this extension from Wichita to Ottawa, Kansas, has been awarded to the Oklahoma Construction Company of Dallas, Texas.

It is expected that the line will be completed early in September. The line will be a combination coupled and welded project, similar to the construction between Wichita and Pampa.

First page of the Manchester, Eng., Guardian, showing cartoon advertisement of the British Commercial Gas Ass'n. The Guardian is one of the most solid newspaper institutions in the British Empire, according to John F. Weedon, of Chicago, who submitted the advertisement

A. G. A. Delegates to National Fuel Meet Appointed

OFFICIAL delegates to the Second National Fuels Meeting, to be held at Cleveland, Ohio, Sept. 17 to 20, have been appointed by President Fogg, as follows:

P. T. Dashiell, The United Gas Improvement Co., Philadelphia, Pa.

J. D. Davis, The U. S. Bureau of Mines, Pittsburgh, Pa.

Henry Fink, Detroit City Gas Co., Detroit, Mich.

A. D. Fryendall, The Peoples Gas Light and Coke Co., Chicago, Ill.

H. O. Loebell, The Surface Combustion Co., New York, N. Y.

R. L. Manier, The Syracuse Lighting Co., Syracuse, N. Y.

I. K. Peck, Midland Utilities Co., Chicago, Ill.

Horace C. Porter, consulting engineer, Philadelphia, Pa.

H. J. Rose, The Koppers Company, Pittsburgh, Pa.

J. T. Ward, Massachusetts Institute of Technology, Cambridge, Mass.

E. C. Weston, Toledo Edison Co., Toledo, Ohio.

H. B. Young, The Chicago By-Product Co., Chicago, Ill.

Can YOU Answer These Questions on House Heating?

WHAT classes are the best prospects for gas house heating?

In determining the gas rate to be charged for house heating, what allowance should be made for the cost of servicing equipment?

With what three spheres of activity should the salesman of gas house heating be familiar?

How many installations should a new house heating salesman be expected to sell in a year, and how long does it take to round out the usefulness of a new salesman?

What are the three steps involved in trying to interest the public in house heating with gas?

What are the best sources of prospects for the salesman?

What are recommended policies for cooperating with heating contractors?

What factors are to be considered in the partial payment plan for gas house heating equipment?

What records are advisable for the company just starting to sell gas house heating? For the company already engaged in selling?

What are recommended policies on performance guarantees and estimated operating costs?

What is the best practice for estimating the cost of gas house heating?

What previous experience is valuable for the service men for house heating equipment?

What is the customary charge for servicing?

What department should handle high bill complaints?

What are the most frequent causes of high bill complaints?

How many jobs can the average service man handle?

The answers to these questions and much other valuable data are given in the annual report of the Sales and Service Policy Subcommittee of the House Heating Committee. Write to Headquarters for your copy today.

MANUFACTURERS SECTION NOMINATES

THE Nominating Committee of the Manufacturers Section have named H. Leigh Whitelaw, of the American Gas Products Corporation, New York, N. Y., as chairman for the year 1928-29, and F. G. Curfman, of the Improved Equipment Company, New York, N. Y., as vice-chairman.

A. G. A. Will Exhibit at Steel Treaters' Show

Which Is to Be Held in Philadelphia October 8-12, the Same Week the A. G. A. Meets in Atlantic City

D. W. Chapman

THE week of October 8th is destined to be an important one for the gas industry. More than 5,000 gas men will be in Atlantic City, N. J., attending the tenth annual convention of the American Gas Association, and at the same time a large and splendid exhibit of the Association will be attracting attention at the convention of the American Society for Steel Treating at Philadelphia, Pa.

What at first glance appeared to be a serious disadvantage, the meeting of these large and important associations at the same time and in near-by cities, now seems likely to add to the value of each. Because of the proximity of the convention cities, it will be possible for delegates to attend both in spite of the fact that they are going on simultaneously, and suitable program arrangements have been made by each association.

The steel treater has been a substantial factor in building up the industrial load of the gas company. An adequate gas supply is an essential in the successful treatment of steel. It is appropriate, therefore, that these two great associations carry on their work side by side, and logical that a great many of the members of one association are greatly interested in the activities of the other.

As in previous years, the American Gas Association will cooperate with gas furnace manufacturers in making an extensive display of modern furnace equipment at the steel treaters' exposition. Seven thousand square feet of floor space has been reserved in the Philadelphia Commercial Museum for the use of the American Gas Furnace Company, the Eclipse Fuel Engineering Company, the Surface Combustion Company, and others who will exhibit modern equipment for the utilization of gas. All furnaces will be in actual operation, and a metallurgical control laboratory, in charge of an experienced metallurgist, will be available to assist in demonstrating that quality of production is inseparably linked to proper heat treatment conducted in modern gas furnaces.

The American Gas Association will have an attractive booth in charge of representatives, who will supply literature and furnish any information in regard to the gas industry which may be of interest to visitors.

A special effort will be made this year

Picture of part of the 1927 A. G. A. Steel Treaters exhibit

to improve on the general attractiveness of the gas furnace display without in the least detracting from the practical value of previous exhibits. Raymond M. Martin, of the Consolidated Gas Company of New York, will assist in planning the arrangement of exhibits, and it is expected that the display will give evidence of his previous experience in handling such projects.

The selection of Philadelphia as the convention city for the steel treaters' society this year is singularly fortunate—situated as it is, in proximity to the manufacturing territories of New Jersey and Pennsylvania, within a short distance of the New York metropolitan area and the American Gas Association convention city, there can be little doubt that all previous attendance records will be broken.

Much of the success of an exposition of this kind depends upon the initiative of the gas companies in the immediate locality. Philadelphia—with ample accommodations, adequate gas supply, improving industrial load, and decreasing industrial rates—is ideally equipped to play host to the steel treaters' association

(Continued on page 490)

Gas Industry of U. S. Contributes Three Papers To World Fuel Conference

To Be Held in London, September 24 to October 6

THE gas industry in the United States is to be well represented on the program of the World Fuel Conference, which is to be held under the auspices of the World Power Conference in London, England, September 24 to October 6.

The American Committee of the World Power Conference, of which O. C. Merrill, executive secretary, Federal Power Commission, Washington, D. C., is chairman, has invited the American Gas Association to contribute three papers to the conference.

H. C. Cooper, of the Hope Natural Gas Co., Pittsburgh, Pa., and chairman of the Main Technical and Research Committee of the Natural Gas Department of the American Gas Association, is contributing a paper on "The Long-Distance Transmission of Gas."

Another contribution will cover part of a paper on "Domestic Heating by the Use of Solid Fuel, Oil, Gas, and Electricity." The preparation of this in the hands of A. Gordon King, service engineer; C. G. Segeler, industrial editor; and E. D. Milener, industrial research representative, of the A. G. A. Headquarters Staff.

The third paper will be on the "Utilization of Gas in Industrial Furnaces." This paper is being prepared by a special committee of the Industrial Gas Section, in conjunction with committees of the American Society of Mechanical Engineers, American Society for Steel Treating, and American Society of Heating & Ventilating Engineers. The A. G. A. committee consists of:

A. M. Apmann, chairman, Consolidated Gas Co. of N. Y., New York, N. Y.

H. O. Andrew, *Gas Age-Record*, New York, N. Y.

C. W. Berghorn, Association Headquarters, New York, N. Y.

J. P. Leinroth, Public Service Electric & Gas Co., Newark, N. J.

H. O. Loebell, Combustion Utilities Corp., New York, N. Y.

F. C. Mackey, Public Service Co. of Northern Illinois, Chicago, Ill.

J. B. Nealey, Association Headquarters, New York, N. Y.

Other members of the American Committee of the World Power Conference, in addition to Chairman Merrill, are: Vice-chairman, Henry J. Pierce, Electric Bond and Share Co.; treasurer, H. M. Addinsell, Harris, Forbes & Co.

Editorial

The Convention

IT is characteristic of conventions of the American Gas Association that every record of achievement discussed or even mentioned is tempered with consideration of a still better way, or of the next step into the future. There is, of course, a pardonable feeling of the satisfaction that comes from accomplishment, but there has never been a disposition to take it all out in patting one's self, or one's committee, or one's section, or the industry, on its back and letting it go at that.

To the gas industry, history serves a unique and peculiar function. We have a record of more than a century chock full of absorbing and heroic incidents. There has been a constant and successful effort to improve service to the public in the hundred-odd years of gas history. "Keep the holder up" is no mere gesture; it is a statement of earnest purpose.

No one who has attended any convention of the Association, or who has read its proceedings, or done both, will question the statement that never does there appear a disposition to rest on our laurels or to bask in the warm sunshine of accomplished deeds. Rather, we read the pages of our history of achievement and obtain instead of self-satisfaction, stimuli to greater accomplishment.

An industry with a different attitude towards its record might be disposed to dwell upon the rapid advancement in service to the public, the steady improvement in technical efficiency, the enduring solidity of our financial structure, the development of our public relations, and the long row of conventions of the American Gas Association and its predecessor organizations. We would have plenty to talk about if that were all. The nine conventions of the present organization, with steadily increasing attendance, constantly enlarging exhibitions, and more and more significant programs, would give us ample excuse to feel self-satisfied. But we have no such feeling. The Tenth Annual Convention, October 8 to 12 next in Atlantic City, is no more important from the historical viewpoint than was the Ninth or the Third. Its importance lies in the fact that it will manifest the superstructure built with infinite care and effort and patience upon the foundations laid down by its leaders. As always before, each element in the structure will indicate the more important lines of endeavor for the immediate future, eliminating or subordinating those activities which time and thought have shown to be less important. It is because the annual convention of our Association is always the mental testing laboratory of the industry that each convention is more significant than the last.

Under the leadership of a General Sessions Convention Program Committee, headed by Mr. P. S. Young, supplemented by the careful planning of the section program committees, there will be offered contributions from the best thought within and without the organization concerning the vital affairs of the manufactured and natural gas industries.

We shall gain from these addresses and discussions, and from the interchange of social and professional contacts, clear ideas of the next step. So, as we pass this milestone, we shall be looking forward to the next rather than back at the last ten or twenty or fifty.

Plan now to be there then!

By ALEXANDER FORWARD,
Managing Director.

TIDE OF MEN AND AFFAIRS

Victor Starzenski Joins Twenty-Year Club

ON July 3, Victor Starzenski, Schenectady division manager, New York Power and Light Co., celebrated the completion of 20 years' service with his company and its predecessors.

Mr. Starzenski is an active member of the American Gas Association, being a member of the Managing Committee of the Technical Section, and of several other important committees. He is also prominent in civic affairs in Schenectady. He is one of the prime movers in the aviation movement in his city, and is now director of the local airport. He is a director of the Chamber of Commerce, and is prominently identified with the Humane Society, the Community Chest and other organizations. He is also head coach of the Union College lacrosse team, and was mentor of the team that captured the New York State championship last year.

The *Schenectady Union-Star* commented on the occasion of Mr. Starzenski completing 20 years' service in an editorial on July 3. Abstracts of the editorial follow:

"His successive promotions during the twenty years indicate the high degree of excellence of his work. He belongs to the newer school of utility officials who put service to the public foremost among their functions. The twenty years have seen a great change in corporate ways of doing business. Not only has there been a great increase in the volume of business and in the number of consumers of electric current and gas, but the relations of corporations with the public have changed. Instead of being tightly exclusive, with the bulk of the stock in the hands of a few owners, many corporations are now largely owned by their customers. It is only a few years ago that it became possible for a customer to buy over the counter a share of a utility stock, and to pay for it in installments.

"These changes have come about through the influence of young men like him who have entered the business in the two decades marked by Mr. Starzenski's connection with Schenectady utilities. The idea of public service has been thoroughly instilled into the personnel of the corporation, so that uniform courtesy in contacts with the public has taken the place of the hardened attitude of indifference which thirty years ago marked too many corporations.

"The Schenectady public has come to have a high personal regard for Mr. Starzenski. He has been identified with numerous civic movements for progress, has been helpful to the community in many ways outside the sphere of his official duties, and commands the confidence of the people. If corporations had more such men, it would be better for them."

ELMER B. DUNKAK, assistant to the general industrial fuel representative, Public Service Electric and Gas Company, Newark, N. J., has resigned to take charge of the sales activities of The C. M. Kemp Manufacturing Company, Baltimore, Maryland.

Mr. Dunkak has been with the public service company for about six years. He is a graduate of Pratt Institute in the Industrial Chemistry Course. For four and a half years he was industrial fuel representative in the Passaic District and in 1927 was made assistant to the general industrial fuel representative. Mr. Dunkak has been an active member of the Industrial Gas Section of the A. G. A., having served on several important committees.

EBEN F. PUTNAM, president of the Greenwich Gas Co., Greenwich, Conn., has been elected president of the Greenwich Chamber of Commerce.

JOHN S. REESMAN has resigned his position of district manager with the Public Service Co. of Northern Illinois, at Evanston, Ill., because of ill health. Joseph W. Kehoe, who has been secretary and assistant treasurer, has succeeded Mr. Reesman.

IT has been announced that *Oil Field Engineering* and *The Petroleum Register* have moved to Chestnut and 56th Streets, Philadelphia, Pennsylvania.

E. A. KRAH, Jr., and C. A. Detweiler have taken over the active sales management of the Pittsburgh City Sales Office, 110 Jenkins Arcade, Pittsburgh, Pa., of The Pittsburgh Water Heater Company. Both Mr. Krah and Mr. Detweiler have been associated with the company in various executive positions for some time.

EDWIN H. ROBNETT, stock campaign manager, Public Service Stock and Bond Company, Newark, N. J., has been elected secretary of the Bond Club of New Jersey.

T. A. KENNEY, who recently became a director of the Commonwealth Power Corporation, has been elected a vice-president and director of the Allied Power & Light Corporation, which was formed recently to consolidate the interests of Hodenpyl, Hardy & Company, Inc., and Stevens & Wood, Inc.

F. BERTRAM HATCHER has been transferred from the Boston Office of Stone & Webster, Inc., to the Haverhill Gas Company, Haverhill, Mass. Mr. Hatcher was formerly connected with the Virginia Electric and Power Company. He will fill the position of district representative with the Haverhill company.

FREDERICK S. Whittaker has been elected treasurer of The Philadelphia Gas Works Company, according to an announcement made by Paul Thompson, President. Mr. Whittaker, who had been assistant treasurer of the company, succeeds the late William H. Marshall, who died on June 11.

Mr. Whittaker's entire business career, covering a period of thirty-seven years, has been with The United Gas Improvement Company, of which The Philadelphia Gas Company is a subsidiary, or associated companies. He started as a clerk in the engineering department of U. G. I. in 1921. In 1895 he was promoted to assistant cost accountant and three years later was made special accountant. Later he was chosen assistant comptroller of the Philadelphia Gas Works, and in January, 1928, he became assistant treasurer of The Philadelphia Gas Works Company. He is vice-president of the United Savings and Beneficial Association, a U. G. I. employees' organization, and treasurer of the U. G. I. Beneficial Association.

D. B. McCUNE, formerly in charge of operations of the Natural Gas Company of West Virginia of the Pittsburgh Group, has been appointed general superintendent of distribution of all the companies comprising the Pittsburgh Group of Columbia System.

GEORGE M. WHITWELL, secretary of the Washington Gas Light Company, Washington, D. C., was recently elected president of the Rotary Club of Washington, D. C. Mr. Whitwell was for the past year vice-president of the organization, and the honor accorded him is a signal one in view of the national influence of the local organization because of its situation.

JOSEPH TERRIAULT has been appointed resident manager of the Saratoga, N. Y., district of the New York Power & Light Corporation.

FRANK G. DEAN has resigned from the Barstow Stove Company, where he was in charge of sales to gas companies and consulting engineer on gas range construction, to accept a position as sales manager of the A. & E. Pitman Manufacturing Company, of Lynn, Mass. Mr. Dean has been connected with various gas appliances sales enterprises for twenty years and is well known in New England.

T. D. HANN, formerly in charge of the Fayette County Gas and Greensboro Gas Company of the Pittsburgh Group, has been appointed general superintendent of production for all the companies comprising the Pittsburgh Group of Columbia System.

J. P. Tucker

THE Cleveland Gas Burner & Appliance Company announces the appointment of John P. Tucker as their Southwestern representative. He will contact the gas companies and the plumbing and heating trade in the states of Texas, Oklahoma, Arkansas, Louisiana, Eastern Mississippi, and Eastern Tennessee.

Mr. Tucker is a graduate of the A. & M. College of Texas. He has been in the gas business for a number of years, serving with the Fort Worth Gas Company, the Lone Star Gas Company, and the Dallas Gas Company, respectively.

T. P. McCREA, secretary of Los Angeles Gas and Electric Corporation, Los Angeles, Calif., has resigned. He has been in the employ of the company for more than 35 years, serving the last 12 years as secretary.

F. E. Seaver, at present assistant secretary, will become secretary, filling the vacancy caused by Mr. McCrea's resignation.

Frank Weiss, manager new business, will become a member of the Board of Directors, filling the vacancy caused by the resignation of Mr. McCrea.

R. M. THOMPSON, formerly New England sales manager of the Michigan Stove Company, and more recently sales manager for the G. S. Blodgett Oven Company, Burlington, Vt., is now acting as manufacturers' agent for hotel and restaurant appliances in New England.

MAJOR T. J. STRICKLER, vice-president and general manager of the Kansas City Gas Company, Kansas City, Mo., was recently elected president of the Kansas City Safety Council.

Major Strickler last year was one of the vice-presidents of the Safety Council.

A. B. GREENLEAF, of The Peoples Gas Light and Coke Company, Chicago, Ill., was elected a director of the National Industrial Advertisers' Association, at the recent St. Louis convention of the organization. The American Gas Association's exhibit of industrial gas advertising at the National Industrial Advertising Association's exhibit held in the Hotel Chase in this city attracted wide attention from the 500 delegates attending the convention.

FREDERICK B. TRACY, divisional manager of the Central Indiana Gas Company, Muncie, Ind., has been appointed general manager of the Jackson County Light, Heat and Power Company at Independence, Mo. Mr. Tracy is to be succeeded by Frank W. Budd, who is now auditor.

Mr. Tracy came to Muncie in 1911 from Little Rock, Ark., where he was in charge of the office of the Little Rock Gas Company.

In 1912, Mr. Budd accepted his first position with the Central Indiana Gas Company for a two-year period. He then went to Columbus, O., for a year with the Columbus Gas Company, after which he was associated with the Spokane Gas and Fuel Company at Spokane, Wash. He returned to the Muncie concern in 1918 as assistant engineer and six years later became auditor.

Real Service Record of Laclede Company Employee

MORE than half a century of continuous service with The Laclede Gas Light Company, St. Louis, Mo., was the record of John A. Tompkins, 75 years old, who died July 2. He began his service as a clerk in 1873. Mr. Tompkins refused a pension by the company, preferring to continue with his duties in the customers' accounting department. He became ill at the office just three days prior to his death.

In Memoriam

BERNARD J. CRAHAN, a veteran of the gas industry, died suddenly on June 6th at Detroit, Michigan, in his 62nd year. At the time of his death he was not active in business affairs, but during the course of his 38 years' gas experience, he built a record of faithfulness and many friendships. For a number of years Mr. Crahan managed subsidiary gas properties for the American Electric Light & Power Company at Joplin, Mo., Portsmouth, Ohio, and at Port Huron, Michigan.

LEONARD LOOP, production superintendent of the Devonian Oil Co. for the past 25 years, died at his home in Tulsa, Okla., on June 12.

Herbert Lloyd Dies

HERBERT LLOYD, of Bryn Mawr, president of the Electric Storage Battery Co., died July 4 in his 67th year, following a long illness. Forty years ago Mr. Lloyd took charge of the laboratory of the Welsbach Light Company, and later took a similar position with the United Gas Improvement Co., Philadelphia, Pa.

Death of John O'Connell Ends 72-Year Service Record

WHAT is certainly the longest service record in the gas industry, and probably the longest for any American industry, was ended July 14 with the death of John O'Connell, who has been in the employ of the Consolidated Gas Co. of New York for the past 72 years.

At his death he was general foreman of the company's works at Twenty-first Street and Avenue A.

Mr. O'Connell was born in County Cork, Ireland, 89 years ago. In 1852 his parents settled in Philadelphia and two years later he came from Philadelphia to this city. In 1856 he entered the employ of the gas company.

Throughout his seventy-two years' service, Mr. O'Connell lived within a stone's throw of the company's plant. He repeatedly refused further advancement, lest he should have to leave the neighborhood, which he went out of but a few times in his life. Once was when he rode to 125th Street and back in the subway three years ago, and another time was when he rode to the battery, the only occasion when he had been below Fourteenth Street.

Two years ago George B. Cortelyou, president of the Consolidated Gas Co., and the Board of Directors gave a dinner in Mr. O'Connell's honor. He was made a member of the company's Quarter Century Club at that time and a bag of gold was presented to him.

He was the holder of considerable stock of the company and had refused retirement on several occasions.

Affiliated Association Activities

Empire State Gas & Electric Association

J. L. Haley

ABOUT 125 delegates enjoyed a two-day session of the Commercial Section of the Empire State Gas and Electric Association on June 28 and 29 at Utica. A splendid program was arranged covering gas and electric merchandising, water heater sales, merchandise accounting and many other interesting commercial subjects.

J. L. Haley, vice-president of the New York Power and Light Corporation, was elected Chairman for the coming year.

The entertainment features included inspection trips to industrial plants, golf, and tea for the ladies.

Canadian Gas Association

THE big yearly event of the gas industry of Canada occurred in Hamilton, Ont., June 21 and 22, when the convention of the Canadian Gas Association was held. A splendid program of exceptionally good papers covering many phases of the gas man's job was presented.

The following officers were elected: President, Frank Elcock, Ottawa Gas Company, Ottawa, Ont.; first vice-president, K. L. Dawson, Nova Scotia Electric Power & Gas Company, Halifax, N. S.; second vice-president, A. T. Leavitt, Hamilton By-Product Coke Ovens, Ltd., Hamilton, Ont.; secretary-treasurer, George W. Allen, Toronto, Ont. Executive Committee: Arthur Hewitt, J. S. Norris, J. M. H. Young, C. C. Folger, V. S. McIntyre, Col. D. R. Street, J. J. Humphreys, and C. A. Jeffries.

It was decided to hold the next convention in the City of Ottawa on June 13 and 14, 1929.

Missouri Association of Public Utilities

THE following have been appointed by President A. E. Reynolds as representatives on the A. G. A. sectional managing committees to serve for the year commencing October 1928:

Accounting, E. F. Hannah, of Springfield; Commercial, H. G. Treichel, of St. Louis; Manufacturers, I. W. Peffly, of New York; Publicity and Advertising, R. G. Lewis, of St. Louis; Technical, T. J. Strickler, of Kansas City; and Industrial Gas, W. D. Thompson, of St. Louis.

Pennsylvania Natural Gas Men's Association

G. W. Ratcliffe

THE first convention of the Pennsylvania Natural Gas Men's Association held in Butler, Pa., June 20 and 21, 1928, was such a successful event that there is no doubt that a convention will be held yearly.

George W. Ratcliffe, of the Columbia Gas and Electric Corp., was elected president. George E. Whitwell was made vice-president, and E. J. Stephany, secretary-treasurer for the coming year.

New England Gas Association

C. D. Williams

THE many important activities of the New England Gas Association, including the cooperative advertising campaign which the gas industry of the entire country is watching with keen interest, has made necessary the appointment of an Executive Secretary devoting his entire time to the affairs of the Association.

C. D. Williams, formerly New England sales manager of the National Refrigerating Company, has been secured for this work. Mr. Williams brings with him an extensive experience chiefly along merchandising and publicity lines. He has established the office of the Association at 41 Mount Vernon Street, Boston, Mass.

Mr. Williams was educated at Berkeley Preparatory School, New York; Columbia University, and the University of Geneva, Switzerland. He was first employed by the Western Electric Company for about ten years, starting as office boy and finishing as auditor of disbursements at New York and Chicago. He then occupied sales managerial positions with the Simplex Electric Heating Company, Stuart Howland Co., Maxwell-Chalmers Automobiles, Jordon Automobiles, and the National Refrigerator Company.

"I have an absolute conviction of the possibilities of the future of the gas industry," Mr. Williams recently stated, "which in my opinion requires approximately the same appreciation of methods employed in other industries utilizing mass distribution on the basis of publicity-produced demand. In this conception of the future of the industry, however, I do not at all lose sight of the difficulties surrounding our individual problems."

"It seems to me," continued Mr. Williams, "that, as Napoleon said (or may have said), 'a difficulty stated is half overcome.'

"I believe, therefore, a frank analysis of our job, coupled with an enthusiastic determination to head for where we belong and keep on heading there will eventually produce unbelieveable results."

Michigan Gas Association

THE following officers were elected at the annual convention of the Michigan Gas Association held July 5, 6, and 7 at Mackinac, Mich.:

President, Frank A. Newton, Consumers Power Co., Jackson; vice-president, A. J. Snyder, Detroit City Gas Co., Detroit; and secretary-treasurer, A. G. Schroeder, Grand Rapids Gas Co., Grand Rapids.

Pacific Coast Gas Association

PLANS for the 15th annual convention of the Pacific Coast Gas Association are assuming definite proportions, according to advice from the executive secretary of the Association, Clifford Johnstone.

The Convention will be held at the Hotel Coronado, California, September 17 to 20 and will feature an exhibit of the latest gas appliances as well as many new merchandising features. The San Diego Consolidated Gas & Electric Company is making a special effort to be the genial host and has arranged a program for Friday, September 21, that will give the membership an opportunity to visit the various exhibits and to inspect the property of the San Diego Company.

The Versatile Laundry Dryer

A RECENT survey discovered gas-fired domestic laundry dryers being used:

In a shoe-heel factory, drying wood for heels and the cement used in attaching covering material to the wooden forms.

In a chemical laboratory, for general drying.

In a photographer's studio to dry films and prints.

In a New York City hospital, for emergency washing.

In a New York City church, to dry vestments for the choir.

In a Y. W. C. A., to dry bathing suits.

In a club, to dry gymnasium clothing.

Winner of Peoples Co. Contest Will Attend Convention

SOME employee of The Peoples Gas Light and Coke Company of Chicago, Ill., will attend the annual convention of the American Gas Association at Atlantic City, October 8 to 12 with all expenses paid including salary, according to announcement made in a recent issue of *The Peoples Gas Club News.*

The company is conducting a prospect contest and the man or woman who obtains the highest individual score for the summer will be given the trip to Atlantic City.

A schedule of points for each completed sale during the period has been worked out.

A. G. A. Will Exhibit

(Continued from page 484)

this year. The Philadelphia Gas Works Company is represented on the committee which has the exposition in charge by H. S. Christman, to whom much credit is due for his untiring effort in the interest of the exposition.

The Steel Treaters' Convention will be in session on the Friday following the close of the American Gas Association Convention. Many of the papers which are of prime importance to the industrial gas engineer have been reserved for presentation at that time. No detail will be left unattended to which is necessary in order to make it possible for visitors to participate in both conventions.

It appears that few will desire to miss the unusual opportunity afforded this year, and it is confidently expected that the previous attendance records at annual meetings of these two associations will be eclipsed.

Members of the committee are:

D. W. Chapman, chairman, The Peoples Gas Light and Coke Co., Chicago, Ill.

E. M. Rowand, Jr., vice-chairman, Philadelphia Suburban Counties Gas & Electric Co., Norristown, Pa.

A. M. Apmann, Consolidated Gas Company of N. Y., New York, N. Y.

R. B. Burr, Logan Gas Company, Columbus, Ohio.

H. S. Christman, United Gas Improvement Co., Philadelphia, Pa.

E. B. Dunkak, C. M. Kemp Manufacturing Co., Baltimore, Md.

NATURAL GAS DEPARTMENT

S. W. MEALS, Chairman H. C. MORRIS, Vice-Chairman

The Finance Committee—What It Is and What It Does

R. R. Young

H. E. McGowan

James Lawrence

J. D. Creveling

THE Finance Committee of the American Gas Association has general supervision, under the direction of the Executive Board, of all financial affairs of the Association.

A personnel of representative gas men enables this Committee to give efficient and impartial service to the industry at large.

The following compose the committee:

J. S. DeHart, Jr.

Chairman, James Lawrence, American Light and Traction Co., New York, N. Y.

J. D. Creveling, Henry L. Doherty & Co., New York, N. Y.

J. S. DeHart, Jr., Isbell-Porter Co., Newark, N. J.

H. E. McGowan, The Brooklyn Union Gas Co., Brooklyn, N. Y.

R. R. Young, The Public Service Electric and Gas Co., Newark, N. J.

Mr. Creveling is the Natural Gas Department representative on the committee.

Alleged Savers on Appliances Are Called Dangerous

A SERIES of tests conducted by the U. S. Bureau of Standards over a period of years has proved that many of the attachments being sold for use on gas stoves not only fail to deliver the economics claimed for them, but frequently create dangerous conditions, according to J. H. Eiseman, associate gas engineer of the bureau, writing in a recent issue of the *American Gas Journal*.

"Some of these appliances have merely failed to fulfill the claims made for them and have in no way created hazards; others have produced conditions which were extremely dangerous," he says. "So-called 'gas savers' of various types were tested by the bureau, and the tests showed that carbon monoxide is formed by all of the 'savers' and that there is no justification for the exaggerated claims of economy made for any of the 'gas savers' tester." Attachable solid tops, filler-flues, burner protectors and water backs of several kinds are among the attachments tested by the bureau and found to be either inefficient or dangerous because of the incomplete combustion they cause.

Since the establishment of the testing laboratory of the American Gas Association at Cleveland, there have been marked improvements in gas appliances, such as ranges, space heaters and water heaters, says Mr. Eiseman. "Purchasers of such major appliances are likely to seek the advice of gas companies or reliable dealers, and should be encouraged to do so. The information now available regarding this class of appliances is ample for the guidance of purchasers."

Roy Martin Wins McCarter Medal for Saving Life

Roy Martin

ROY MARTIN, of Jeffersonville, Ind., employee of the Interstate Public Service Company, was presented with the McCarter Medal and certificate recently for having saved the life of a fellow employee by using the prone pressure method of resuscitation. The medal is awarded by Thos. N. McCarter, president of the Public Service Electric and Gas Company of New Jersey.

The medal was presented by the Mayor, Harry C. Poindexter. Capt. L. D. Spragle, district manager for the Interstate Public Service Company, presided and David MacNaughton, of the Interstate, spoke on accident prevention; Wilmer T. Fox, of Jeffersonville, gave an interesting talk on "Some Legal Aspects of Accident Prevention."

Forest Humphreys, director of safety for the American Car and Foundry Company, told of the accident prevention work of that company. A demonstration of "Prone Pressure Method of Resuscitation" was given by Robert Stuart and James Dunbar, of New Albany, made a few interesting remarks of the work of the Interstate employees.

A Gas-Fired Laundry Dryer Will Fill the Bill

THE following editorial, from the New York Herald-Tribune, calls for a gas-fired laundry dryer:

Each new era sets in to an accompaniment of grumbling from the groundlings, and the aviation era is no exception. The law has taken note of this protest in its more serious aspects. And what, pray, is to be done for the Rochester housewives who complain that grease and oil, dripping from planes using the municipal air port are damaging clothes hung on the line to dry?

"The Rochester air-port officials are said to be at a loss to solve this problem. But solve it they must, for this is a complaint that cannot be ignored. The fury of a woman scorned is tame compared with that of the woman who sees her clean wash ruined on the line. She does not let the subject rest: she discusses it fluently with the neighbors across the back fences; she goes into it minutely with her husband; eventually she casts her ballot with that ruined wash in mind. Are there politicians in Rochester? Let them consider well or the issue of the next election will be the sanctity of the wash.

"Sympathy there must be for the harassed air-port officials, of course. It is a pretty technical problem that confronts them. Perhaps, after all, it will have to be solved indirectly. What do they say to free air rides for all housewives whose clean clothes suffer from airplane engine oil? Is there not, in the nature of the offending substance, a hint as to the nature of at least a temporary remedy?"

1928 Refrigeration Report Contains Valuable Information

VALUABLE recommendations on methods of organizing an effective refrigerator sales force, advertising gas refrigeration, securing prospects and leads, and training salesmen to close sales are among the helpful suggestions given in the 1928 report of the Refrigeration Committee.

Among the questions answered in this report are the following:

1. Is a seasonal or all-year sales activity best? From the standpoint of sales expense? Orders taken? Maintenance of trained selling force?

2. What is the average cost of adequately training a refrigerator salesman?

3. Are special refrigeration salesmen desirable in every case?

4. What precautions are necessary in compensating and supervising regular appliance salesmen who sell refrigerators?

5. What are the advantages of the gas refrigerator over other mechanical refrigerators which should be given special attention in advertising?

6. What should the newspaper advertising aim to accomplish? What are the best methods of supporting newspaper advertising?

7. Who are prospects for domestic refrigeration? Commerical refrigeration?

8. How many meters should be assigned to each special salesman? Regular domestic salesmen?

9. What is a reasonable retail sales quota for the first year?

10. What are the relative sales possibilities in the domestic and commercial fields?

In addition the report contains a description of the construction and operation of two commercial units which will shortly be available. The growth of gas refrigerator sales during the past year in a select list of cities is traced also.

Copies of the 1928 report of the Refrigeration Committee can be had from A. G. A. Headquarters, 420 Lexington Ave., New York, N. Y.

The Application of the Probability Curve to the Life of Pipe

By V. V. KENDALL
National Tube Company, Pittsburgh, Pa.

THE application of the probability curve or the law of large figures, as it is called by the Germans, to industrial problems has been a fairly recent development. Its real value has perhaps not been fully appreciated in this country. The probability curve is a tool by which we can determine in any mass of data whether a normal condition is operating. If, when the data are plotted, certain abnormalities are brought to light, the causes producing these abnormalities can be discovered. This makes a very valuable tool since the interpretation of the data will bring to light many things that would otherwise have remained concealed.

The recent paper of R. G. Griswold[1] has initiated the application of probability curve calculation to the old question of the relative life of wrought iron and steel. The data referred to in his paper are those of the Philadelphia Gas Works Co., Philadelphia, Pa. These data were originally given in the report of the Distribution Committee, Proceedings, American Gas Association (1924), although calculated in an entirely different manner. In the data given, wrought iron was installed from 1898 to 1906, steel from 1906 to 1916, and galvanized steel from 1916 to date.[2]

In applying the probability curve to the consideration of these data, there are two ways of calculating it. In the first

[1] "Facts Concerning the Life of Pipe," American Gas Association Monthly (March, 1928).

[2] It might also be stated that the Hickenlooper coating was used on both the wrought iron and the steel and would increase the life of each materially. This factor we will have to assume as constant for both materials.

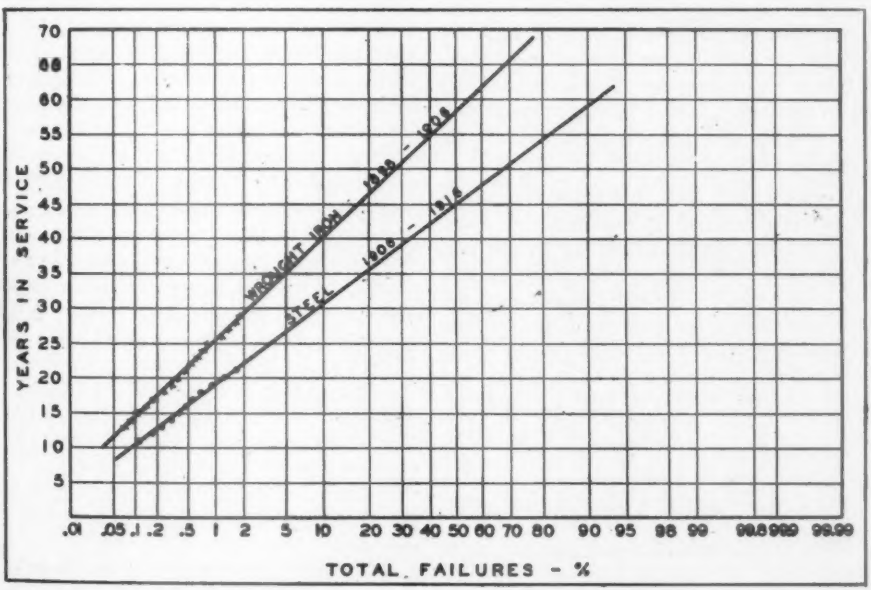


Figure 1

method, that used by Mr. Griswold, the pipe failures *in any one year* are determined and the probability curve on which this point falls is taken from the table accompanying his paper. The second method is to calculate the *total number* of failures up to and including that year and plot these points on probability curve paper.[3] The average is then read as the value of the curve at the 50 per cent line.

For example, 191,121 wrought iron services have been in the ground 21 years. Of this number, a total of 873 or .456 per cent have failed. There have been 27,713 services in the ground 29 years, of which 524 or 1.89 per cent have failed. These percentages are then plotted and the curve (straight line) extended to cut the 50 per cent line, and the value at that point would be the average life of all of the wrought iron services installed in the period from 1898 to 1906.

In the case of steel, 10,231 services have been in the ground 21 years, of which a total of 184 or 1.79 per cent have failed. No steel services had been installed for a longer period. Again, 162,895 steel services have been in the ground 11 years, of which 203 or .124 per cent have failed. These data for both wrought iron and steel are plotted in Fig. 1 and give an average life for wrought iron of 58 years and of 45 years for steel.

Going back for the moment to the other method of calculation, we take the 191,121 wrought iron services which have been in the ground 21 years. In the 21st year there were 161 failures, making the percentage for that year .084, giving an average life of 55 years (taken from the table). Each year is taken up in this way and the results plotted as given in Fig. 2 of Mr. Griswold's paper. (Also reproduced as Fig. 2 of this paper.) In considering the failures occurring in each year rather than the total failures up to that point there will be a certain amount of deviation of the individual points which will result in slight inaccuracies. For example, of the services installed in 1899, 57 failed in the 29th year, 238 in the 26th, and 77 in the 27th. These points would give average lives of 58, 47, and 56 years. The average life of the 1899 services, plotting total percentages, is 54 years. Moreover, the points for the very short periods of time will not lie on the curve since they are in the very low part of the curve where there is always considerable deviation from the normal. This would give abnormal values, such as the values for steel from the sixth year down. (See Fig. 2.)

Now, return to Fig. 1. Our curves show an average life of 58 years for the wrought iron installed from 1898 to 1906, and of 45 years for the steel installed from 1906 to 1916. If the soil in which the 191,121 wrought iron services were buried was exactly the same from a corrosion standpoint as the soil in which the 162,895 steel services were buried, then wrought iron has about 29 per cent longer life than steel. To determine this point it is only necessary to plot the average life of the services installed in each year. We therefore take each year separately, plot total percentages for each year of service, draw our curve, and read off the average. Since the yearly installations consisted of from 10,000 to 20,000 services, accurate averages should result. It was found, however, that the points for less than 12 years' service were in the skew part of the curve and no reliable average could be obtained.[4] The yearly averages are therefore plotted only to 1914. Fig. 3 gives these data.

We find that the wrought iron laid in 1898-1902 has a considerably longer life than that laid in 1903-1906, a decrease in average life of from about 60 years to 49 years. It is hardly to be supposed that the quality of the wrought iron had de-

[3] In probability curve paper the percentage scale is arbitrarily distorted so that the normal probability curve appears as a straight line. This is a very convenient arrangement as it permits abnormalities to be quickly detected.

[4] Points on the extreme upper and lower limits of the probability curve never lie on the curve since it is here that the greatest deviation from the normal is found.

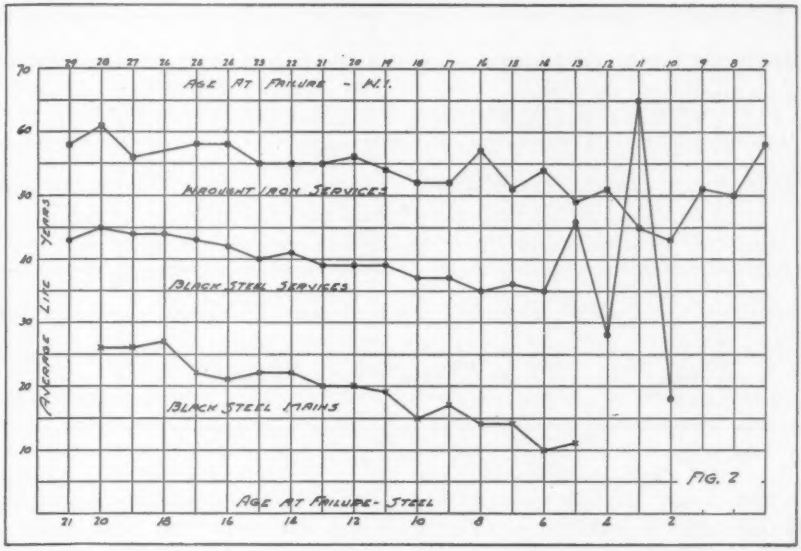


Figure 2

creased from one period to the other, particularly as from 1903 on the average life was steadily decreasing. Neither is it logical to assume that the steel of 1906 was poor in quality as compared with 1907, especially since the wrought iron of 1906 was just as bad compared with the wrought iron of 1905. Both the wrought iron and the steel of 1906 had a comparatively short life. The same observation applies to the steel of 1911 and 1912 compared with 1910 and 1913. This leads us to the conclusion that the soil in which the services were laid is the variant factor. This conclusion was confirmed by the Bureau of Standards' soil corrosion investigation both by the two-year and the four-year results. A far greater variation was found in the action of different soils on the same material than in the effect of the same soil on different materials. The latest report of this investigation, which comprises some 20 varieties of iron and steel pipe material in 47 different soils, is given by K. H. Logan in the *Transactions of the American Institute of Mining and Metallurgical Engineers for 1927*, from which we quote the following:

"In general the 1926 specimens appear to confirm the conclusions drawn from those removed in 1924. The soil rather than the type of material seems to control the corrosion so far as the ferrous metals are concerned, and apparently the corrosion rates of the wrought materials in any given soil do not markedly differ."

The corrosive conditions which modern iron and steel are called upon to resist are far more severe than those of 25 or 30 years ago. As any community or city develops and the population becomes more dense, the greater number of services are laid in made or filled ground. One-time hollows are filled in with land from excavations, loose in texture, containing possibly a certain amount of cinders and rubbish, and after a few years of settling a residential section is built up. Even if the filled ground is not corrosive in itself, the greater porosity produced would result in a more corrosive condition due to the presence of a greater amount of oxygen or air and the greater ease of infiltration of oxygen. Variation

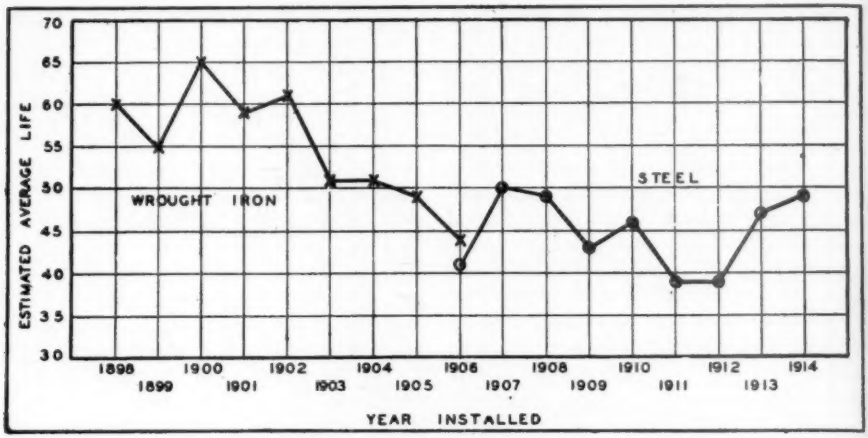


Figure 3

in water supply and the treatment of municipal water supplies is also a factor.

Now as regards Mr. Griswold's Fig. 2, the increase of the average life with increase of the age at failure does not indicate that the tables are at fault. If we examine the data, we find that the services which have been in the ground from 25 to 29 years are those that were laid from 1898 to 1903, and by comparison with Fig. 3 those services were ones of exceptionally long life and before service conditions became more severe. The influence of these long-lived services is felt in the rest of the curve, helping to bring up the average since these services are included in the other points. Fig. 3 gives a much truer picture of the conditions than Fig. 2. If a true average of all the services is desired, the method used in Fig. 1 is the correct one. Remember, however, that a purely mathematical average does not allow for changing conditions.

We find therefore that our first analysis of the data had left out of consideration the most important factor affecting the life of the material. Repeated tests have shown that where the conditions are exactly the same, steel is just as corrosion-resistant a material as wrought iron. It is where some factor has been overlooked, as in the consideration of these data, that erroneous conclusions are drawn. The factors of soil corrosion are many, and are as little understood as they are numerous. The physical condition of the soil, its porosity, fineness or coarseness, its ability to hold water, the amount of oxygen that can permeate it, and the corrosive or non-corrosive constituents it contains renders the forecasting of its effect on materials very difficult. Added to this, the uncertain constituents of made ground as well as the undoubtedly better opportunities for the permeation of oxygen, which is recognized as one of the most important factors in soil corrosion, increase the severity of its corrosive attack as well as the complexity of the problem.

SUMMARY

In considering the interpretation of data on the relative corrosion of wrought iron and steel service pipe by means of the probability curve, to obtain a general average total percentages should be plotted on probability curve paper and the average read at the 50 per cent point of the (straight line) curve. This method, when applied to 191,121 wrought iron services installed from 1898 to 1906 and to 162,895 steel services installed from

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ACCOUNTING SECTION

EDWARD PORTER, Chairman F. H. PATTERSON, Vice-Chairman
H. W. HARTMAN, Secretary

The Utilities As a Field for Investment

(Continued from page 460)

most profitable of this era. As the industry expands, new opportunities for profitable investment in it will be provided. And expansion is assured when you consider the fields for public utility service which are not yet occupied.

Business enterprises and scientific research are together opening vast new fields for gas service. The economic waste of burning coal in the "raw" state and losing valuable constituent parts of it appears to be doomed.

These opportunities for expansion of the public utility industry will be developed. Assurance of that is contained in the record of what has been done within less than half a century. It is assured, *provided* we do not in this country permit individual initiative and enterprise to be hamstrung and shackled.

In view of all the circumstances mentioned or implied in this necessarily brief outline, it must be apparent that the public utility industry is unsurpassed as a field for investment—not for speculation, but for investment. It offers no lure of extraordinary profits, but on the other hand the risk of loss is reduced to a minimum, when the public utility investment is prudently chosen.

In making this choice of an investment, there are four main questions to be asked:

1. Does the company whose security you are considering operate in a productive territory with reasonable prospects for growth?

2. Is the company's property adequate, in extent and physical condition, for the demands upon it?

3. Is the management of the company alert, enterprising, competent and honest?

4. Are the industrial and public relations of the company satisfactory—does it get along harmoniously with its employes, and with the public? For if these relations are good, the company is not likely to be politically harrassed.

When these four questions and those naturally collateral to them can be answered in the affirmative, the securities of the public utility industry are rightly held to be preferred investments.

In soundness and strength, they are second only to federal, state and local government bonds, and they yield generally a considerably better return.

Gas Papers Read at Heating and Ventilating Convention

THE 34th semi-annual convention of the American Society of Heating and Ventilating Engineers, held at West Baden Springs, Indiana, from June 26 to June 29, was opened by a comprehensive paper on gas house heating by W. E. Starke, of the Bryant Heater and Mfg. Co. He presented a picture of the magnitude of the gas industry, both manufactured and natural, stating how the progress of gas house heating was indicated by the adoption of special rates by more than 200 gas companies.

Major Stark told of the technical conditions imposed on a gas boiler when tested by the American Gas Association Testing Laboratory for its rating and its efficiency. He also showed a comparative table of costs for operating a large coal-fired boiler and a large gas-fired boiler. This particularly commendable paper aroused much discussion and it clearly indicated an important trend—that the heating and ventilating engineers are most favorably disposed toward gas heating.

It seemed the general consensus of opinion that gas represented the fuel of the future for automatic house heating and that it was merely a question of time until rates should make its adoption general.

A second paper on gas was presented by A. E. Stacey, Jr., and W. B. Thornton, of the Carrier Engineering Company. This was essentially a description of a new method of gas analysis and did not have any particular relation to the general picture of gas house heating. It was a most favorable contribution on the technique of determination of boiler and furnace efficiencies.

Government in Business

(Continued from page 455)

large group of the public. The rights and interests and welfare of the employee are vitally involved in proposals for government ownership.

Under private ownership the lad who, today, enters an establishment as an errand boy may, in future years, become the head of the house, if he has it in him. The epic of American business is full of such achievements—the section hand, the station agent in the lone way station who becomes the president of the railroad, the bank messenger who becomes the chairman of the board, the iron puddler who becomes a dominant leader in steel, the grocer's clerk who becomes the presiding genius of a nation-wide chain of mercantile establishments—and so on.

Does Government ownership offer such spur to the ambition and initiative of the employee?

Not at all. In Government, preference goes either by political favoritism or a rule of seniority that takes little or no account of merit and discounts initiative. Imagine the power industry of the United States, for instance, in the hands of the employees whose proper ambitions are thus shackled—or the railroads, or the steel mills, or any great agency of business!

The Government neither pays taxes nor advertises. Mass production by the Government means higher and not lower unit costs, frozen wage scales, and stationary instead of advancing standards of living.

The traditional policy of this country on government in business has been officially and convincingly declared by President Coolidge, as follows:

"If it is desirable to protect the people in their freedom and independence, if it is desirable to avoid the blighting effects of monopoly, supported by the money of the taxpayer; if it is desirable to prevent the existence of a privileged class, if it is desirable to shield public officials from the influence of propaganda and the acute pressure of intrenched selfishness, if it is desirable to keep the government unencumbered and clean, with an eye single to the public service, we shall leave the conduct of our private business with the individual, where it belongs, and not undertake to unload it on the government."

What a challenge this presents to the advertising genius of America to protect and preserve from destructive competition by the Government this great industrial civilization which it has done so much to create. This new competition of government ownership must be met and overcome by the same intelligent and sustained advertising methods which have proved so successful in meeting each different kind of competition as it arose. What a privilege is afforded to employ your talents and abilities to insure that the fundamental principles of our Government shall not be undermined!

Years ago it was truthfully said: "Give light and the people will find their own way." Business, with advertising and publicity as its light-giving beacons, must take the leadership in this new competition—this clash of utterly irreconcilable ideas. It is a contest in which truth must prevail, but the way to truth must be made plain so that none need err therein.

Let us, therefore, marshal our resources to arouse an enlightened public opinion, which is all that is necessary to guarantee a continuance of this basic principle of our industrial life.

Gas Students at Johns Hopkins Are Olympic Team Members

TWO members of the Olympic lacrosse team are graduates in Gas Engineering at Johns Hopkins University in 1928, according to announcement of W. J. Huff, Professor of Gas Engineering at the University.

Raymond M. Finn is goal keeper, and his excellent work in the preliminary competition did much toward giving the Johns Hopkins lacrosse team the right to compete in the Olympic games at Amsterdam. Finn is a graduate of the Baltimore Polytechnic and won on open competitive examination the scholarship of the Consolidated Gas Electric Light and Power Company of Baltimore, in 1924. He has held this scholarship since that date.

Frank H. Dotterweich, defense, is also a graduate of the Baltimore Polytechnic. Dotterweich shared in the Koppers Company scholarship last year.

PUBLICITY AND ADVERTISING SECTION
E. FRANK GARDINER, Chairman JAMES M. BENNETT, Vice-Chairman
CHARLES W. PERSON, Secretary

Beware of Modern Art in Advertising

Summary of Developments in Utility Advertising Warns Against Its Use

By IRVING M. TUTEUR
Vice-President, McJunkin Advertising Co., Chicago, Ill.

WHILE the trend toward modern art was evident in the advertisements submitted to the committee during the past year, the committee suggests caution in its general adaptation to public utility advertising. The public utility business is a mass business. Utilities cater to people of all classes and creeds. Modern art is an outgrowth of a class appeal. Sometimes it is so freakish as to be almost beyond the comprehension of the average individual. It had its start in this country in class publications catering very largely to women of much more than the average income.

Modern art has its place in the advertising of things distinctly of feminine appeal. It is hard to see perfume or lip stick advertising, etc., presented in any way but with the modern art treatment today. However, the public utility business is in a different classification altogether, even though many of our products are sold to women.

It seems to me, as chairman of the committee, that modern art is often lacking in merchandising strength, so we would suggest that those who are using this method of advertising today or who are contemplating its adoption, give careful thought to all of the many decided problems before going too far with this type of appeal.

These remarks should not be construed as opposition to the use of art in utility advertising. Quite on the contrary; good art work will do more to attract attention to the message than anything else excepting an announcement of reduction in rates which directly affects the consumer's pocket-book.

It should be borne in mind that a good picture is worth a thousand words. In this business, it is extremely necessary that we not only have good illustrations, but that these illustrations show the use of the product rather than a mere mechanical looking picture of the product. Outside of lamps, there is hardly an electrical or gas product that in itself alone has strong appeal from the standpoint of beauty—and we say this despite the tendency on the part of a great many man-

Abstract of Better Copy Committee report, Public Utilities Advertising Ass'n, presented at annual convention, Detroit, Mich., July 10.

NEW P. U. A. A. OFFICERS

AT the annual convention of the Public Utilities Advertising Association, held at Detroit, Mich., July 9-10, the following officers were elected:

President—J. C. Barnes, New Orleans Public Service Inc., New Orleans, La.

First vice-president—L. D. Gibbs, Edison Electric Illuminating Co. of Boston, Mass.

Second vice-president—Dana H. Howard, Commonwealth Edison Co., Chicago, Ill.

Third vice-president—Irving M. Tuteur, McJunkin Advertising Co., Chicago, Ill.

Treasurer—Charles W. Person, American Gas Association, New York, N. Y. (Re-elected.)

Secretary—T. P. Pfeiffer, Byllesby Engineering and Management Corp., Chicago, Ill. (Re-elected.)

The new directors elected are: Donald M. Mackie, Allied Power and Light Co., Jackson, Mich.; W. H. Hodge, Byllesby Engineering and Management Corp., Chicago, Ill.; James M. Bennett, The Philadelphia Suburban Gas & Electric Co., Philadelphia, Pa.

ufacturers to incorporate the use of color in their merchandise.

A gas range without a background with a graceful feminine touch, and, even a refrigerator are not in themselves things of great beauty in the home. But when you take these products and surround them with an attractive environment and show good-looking housewives accomplishing their daily tasks much more pleasantly and economically through the utilization of these household servants, you have gone a long way in creating that desire for ownership and pride of possession which are two of the greatest stimulating factors in producing sales. Too many of our public utilities in their merchandising activities, either through lack of facilities or through a desire to keep the costs of advertising down, are prone to use a mere cut of the product as ample decoration for their advertisements.

And in this connection the committee again desires to call the attention of this Association to the very splendid cut services which are made available to us through the American Gas Association and other associations. These services are practically alone in their fields. They have been officially endorsed by the Board of Directors of this Association and by the various national associations. They offer to the membership at an infinitely small cost each month a comprehensive and all-embracing assortment of high-grade, human-interest art work.

The advertising manager of a public utility who is a real manager will utilize these services which can readily be adapted to the advertising problems of the average utility. He will get a lot of good material by so doing and he will save his company money.

A number of other definite trends in public utility advertising were noted by the committee in the advertisements submitted for the Better Copy Portfolio. During the past year there seemed to be an increased amount of educational effort and financial advertising on the part of the utilities. It is a step in the right direction because the committee feels that there is no reason whatsoever why the public should not be made acquainted with the financial problems as well as the financial side of the industry.

At the same time there were relatively fewer advertisements purely of the so-called institutional type. The trend seemed to be more toward the selling of appliances or service rather than good-will building advertisements under such general headlines as "Pioneers," "Leadership," "Service," "Faith," etc.

IMAGINATION NEEDED

Without attempting to criticize any of the exhibits received, but merely for the purpose of stimulating thought on this subject, the committee feels that lack of imagination is at times putting some of the copy in a rut. It is often evident that taking the other fellow's ideas seems to be regarded by many of our advertising people as about the easiest way of getting the day's job done. The committee wonders if it isn't possible for us to have a little more original thinking on the part of all of us in telling the utility story or in selling our merchandise. This doesn't mean that there have not been quite a number of outstanding examples of original thinking as applied to advertising on the part of many utilities during the past year, but it is a plea on our part to the industry to discard many of the old bromides that are so apt to handicap our efforts in the future and to give us an unfavorable comparison with the advertising that is today being done by other industries.

The merchandising departments of utility companies are today in a greater measure than ever before confronted with the necessity of standing on their own and supporting themselves without assistance financially from the operating side of the business. This in itself adds greater responsibility on the advertising department

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MANUFACTURERS SECTION

H. LEIGH WHITELAW, Chairman J. A. FRY, Vice-Chairman
C. W. BERGHORN, Secretary

Section Reports Progress in Conference Plan

Organization of Four Divisions is About Completed, and First Conference Will Be Held in September

DEFINITE progress has been made by the Manufacturers' Section in the organization and perfection of its conference plan. This plan was outlined in a recent issue of the MONTHLY, and since that time meetings of three groups of manufacturers have been held. The other group that proposes to organize has not yet had opportunity to meet.

To date the following have met:

Division of Gas Manufacturing and Auxiliary Equipment Manufacturers.

Division of Distribution Equipment Manufacturers.

Division of Utilization Appliance Manufacturers.

At a meeting of the Managing Committee of the Manufacturers' Section, held at Association Headquarters on July 2, it was decided to hold the first conference of manufacturers in the early part of September. Delegates of all divisional groups will attend, as well as members of the Managing Committee of the Section and invited guests. The program of the conference will include papers and discussions of national advertising, cooperation in research, economics of selling, and the A. G. A. Testing Laboratory approval seal. The names of the speakers and the definite program will be given in the September issue of the MONTHLY.

The Division of Gas Manufacturing and Auxiliary Equipment Manufacturers held a meeting at Rochester, N. Y., with W. H. Earle as chairman. Delegates were chosen at this meeting to represent and to serve in a sense as a managing committee for the division.

The delegates chosen are:

C. S. Pinkerton, L. T. Schrader, P. C. Rodgers, M. G. Rahlfs, Geo. W. Parker, G. R. Steere, W. L. Ehlers, W. H. Earle, N. H. Merritt, W. E. Steinwedell, J. S. Haug, and J. S. DeHart, Jr.

The Division of Distribution Equipment Manufacturers held a preliminary meeting in Chicago, on April 12, for the purpose of organizing and selecting delegates. It was agreed at this meeting to divide the division into the following groups: Cast iron pipe and fittings manufacturers, steel pipe and fittings manufacturers, meter and valve manufacturers, and auxiliary equipment manufacturers. The matter of selecting delegates to represent each of these groups at the Manufacturers' Section conference was left to D. B. Stokes, J. M. Denny, and W. G. Gribbel. D. B. Stokes is chairman of this group.

A meeting of the Division of Utilization Appliance Manufacturers, R. C. Hoffman, Chairman, was held in New York on March 20 which was attended by about 65 appliance manufacturer representatives. The division was divided into nine groups and the selection of delegates was made as follows:

Accessory Manufacturers

Earl W. Roberts, chairman, G. A. Robertshaw, H. W. Sweatt, H. E. Kerr, R. H. Maurer, and C. L. Wedow.

Central House Heating Equipment

Thomson King, chairman, E. P. Bailey, R. L. Blodgett, W. L. Thompson, and A. H. Schroth.

Gas Range Manufacturers

Wendell L. Smith, chairman, R. C. Hoffman, Jr., Arthur Stockstrom, John

A. Fry, Merle E. Abbott, James Graham, W. E. Derwent, David F. Kahn, Jacob Teller, and P. R. Tappan.

Incinerator Manufacturers
A. A. Naulin, and Louis Stotz.

Industrial Equipment Manufacturers
H. O. Loebell, O. M. Olsen, P. C. Osterman, and Carl Pletscher.

Laundry Equipment Manufacturers
A. P. Lamneck, and E. N. Hurley, Jr.

Refrigerator Manufacturers
Leslie Thompson, and F. E. Sellman.

Space Heater Manufacturers
Townsend Stites, Hubert Humphrey, K. C. Farnsworth, and Kent S. Clow.

Water Heater Manufacturers
A. P. Brill, H. J. Long, Arthur Friedman, Hartley G. Walker, and James P. Morley.

Of these groups of the Utilization, the Accessory Manufacturers have held an organization meeting.

The division of Office Equipment Manufacturers has not held a meeting yet, but E. A. Norman, chairman, reports that a meeting will be called when problems of interest arise.

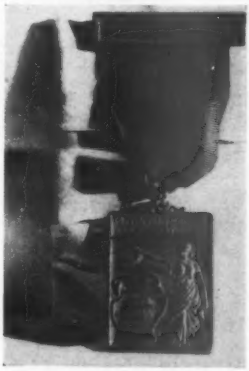
Architects' File Folders Available at Fifty Cents Each

PUBLIC utility companies interested in reaching the architects in their community are urged to send to A. G. A. Headquarters for sample copies of the Architects' File Folder. This folder is especially prepared for use by architects, and in addition to containing authoritative and complete data on all gas appliances, gives the prize-winning plans of the recent small house plan competition.

More than 9000 architects in the country now have copies of this folder, and reports from gas companies purchasing them for distribution to architects are uniform in praise of the book.

The price of the Architects' File Folder is $.50 each. Order direct from J. W. West, Jr., secretary, Commercial Section, American Gas Association, 420 Lexington Ave., New York, N. Y. Order now to insure prompt delivery.

N. Y. Consolidated Wins Window Display Honor



THE Consolidated Gas Company of New York was awarded first prize in the utility group of the photographing contest held by the Merchants Record and Show Window at the Annual Convention of the International Association of Display Men in Toronto, June 11 to 14.

A reproduction of the trophy which was awarded for excellence in window display is shown here. R. M. Martin is in charge of the company's display bureau.

RESEARCH IN GAS

GAS USERS will be interested to know that the manufacturers and distributors of gas, through the American Gas Association, are establishing, at considerable cost, a big testing laboratory in Cleveland, Ohio.

The purpose of the laboratory is to advance engineering and scientific research in the practical use of gas, and to elevate the standards of gas utility service.

When it is realized that more than 70,000,000 people in America use gas in one way or another, it can be seen that the gas industry is performing a fine service in thus trying to improve gas usage for the benefit of its customers.

Many new uses have been found for gas in the last few years and the new laboratory will undoubtedly serve to broaden and improve its field of use. Electricity, too, has widened its field of service. That fact may have prompted the experimental investment of the gas industry, but that this is not altogether a defensive measure can be seen in the fact that nearly all the utilities serving gas are also engaged in the generation and distribution of electricity.

The step is merely in keeping with the modern trend in public utility service.—From the Clarksburg, W. Va., Exponent.

INDUSTRIAL GAS SECTION

F. C. MACKEY, Chairman J. P. LEINROTH, Vice-Chairman

C. W. BERGHORN, Secretary

Announce Program of Fourth Industrial Gas Sales Course

ON Wednesday, Sept. 5, the first session of the fourth course for industrial gas salesmen will be held at the School of Commerce, Accounts and Finance of New York University, located at Washington Square, New York City. The sessions will be held in Room 1034, and will last to Tuesday, Sept. 18.

This is the fourth consecutive year that the Industrial Gas Section of the American Gas Association is offering through its Committee on Education of Personnel a two-week intensive course in industrial gas salesmanship. This year the committee is fortunate in having arranged to have this course conducted by the School of Commerce, Accounts, and Finance of New York University under the able direction of E. E. Ferris, Professor of Salesmanship.

The course will differ from the previous courses offered, and from those given at the Massachusetts Institute of Technology and the University of Illinois, in that it will deal exclusively with salesmanship and its related topics. No industrial gas engineering will be taught, the entire course being devoted to Salesmanship, Sales Correspondence, Cost Accounting, Essentials of Advertising, and other vital subjects, a knowledge of which is essential to successful salesmanship.

The work of the course will be graded, taking into account that this is a special school. At the conclusion of the course, the managers of the several gas companies employing the students will be notified of the respective grades received by the students for the course.

No special preparation will be required of the students attending this course. The text book will be "The Industrial Gas Salesman" available through A. G. A. Headquarters, 420 Lexington Avenue, for $1.50 per copy.

The committee is fortunate in having been able to obtain for this course the services of those professors in the School of Commerce, Accounts, and Finance, who are nationally recognized as authorities upon the subjects which they handle. Many of them are authors of textbooks which are widely used in the universities. It will also be noted that some of the sessions will be conducted by men prominently engaged in the gas industry.

The tuition fee for the Fourth Course for Industrial Gas Salesmen will be $40.00 for the entire course. A limited number of men, who wish to attend one or two lectures, can be accommodated on payment of a fee of $4.00 per day.

Suitable dormitory accommodations will be offered at the Varick House Dormitory, operated by the University.

The program has been announced as follows:

Wednesday, Sept. 5

Welcome and Introduction—Oscar H. Fogg, president, American Gas Association; John T. Madden, dean, School of Commerce, Accounts, and Finance, New York University; J. Paul Leinroth, chairman, Committee on Education of Personnel and Contact with Educational Institutions.

Salesmanship—Prof. E. E. Ferris, Professor of Salesmanship, N. Y. U.

Report Writing—G. L. Courtney, secretary of School of Commerce, Professor of Business English, N. Y. U.

Thursday, Sept. 6

Salesmanship—Prof. E. E. Ferris.

Sales Correspondence—Prof. E. J. Kilduff, assistant dean, School of Commerce, Chairman of Department of Business English, N. Y. U.

Friday, Sept. 7

Salesmanship—Prof. E. E. Ferris.

Production Systems—Prof. W. B. Cornell, Chairman of Department of Management, N. Y. U.

Saturday, Sept. 8

Industrial Heating Requirements—H. O. Loebell, vice-president and general manager, Combustion Utilities Co., New York, N. Y.

Monday, Sept. 10

Salesmanship—Prof. E. E. Ferris.

Essentials of Advertising—Prof. H. E. Agnew, chairman of Department of Marketing, N. Y. U.

Tuesday, Sept. 11

Salesmanship—Prof. E. E. Ferris.

Sales Correspondence—Prof. E. J. Kilduff.

Wednesday, Sept. 12

Salesmanship—Prof. E. E. Ferris.

Essentials of Advertising—Prof. H. E. Agnew.

Thursday, Sept. 13

Salesmanship—Prof. E. E. Ferris.

Types of Industrial Organization—Prof. W. B. Cornell.

Friday, Sept. 14

Cost Accounting—Dean J. T. Madden.

Market Analysis—E. G. de Coriolis, Combustion Utilities Corp., Toledo, Ohio.

Saturday, Sept. 15

Market Analysis—E. G. de Coriolis.

Monday, Sept. 17

Salesmanship—Prof. E. E. Ferris.

Gas in Relation to Competitive Fuels—A. M. Apmann, engineer of utilization, Consolidated Gas Co. of N. Y.

Tuesday, Sept. 18

Factory Compensation Systems—Prof. W. B. Cornell.

Résumé—J. Paul Leinroth.

Further information can be secured from A. G. A. Headquarters.

Maryland Utilities Association

THE mid-year meeting of the Maryland Utilities Association will be held Friday, September 7, 1928, at the Braddock Hotel, Braddock Heights, Maryland.

A very interesting program is being prepared, with group meetings in the morning, a golf tournament, sightseeing trips, and special entertainment for ladies in the afternoon, and a dinner dance in the evening. Details of the program will be announced later. H. T. Connolly, of Baltimore, is President of this Association.

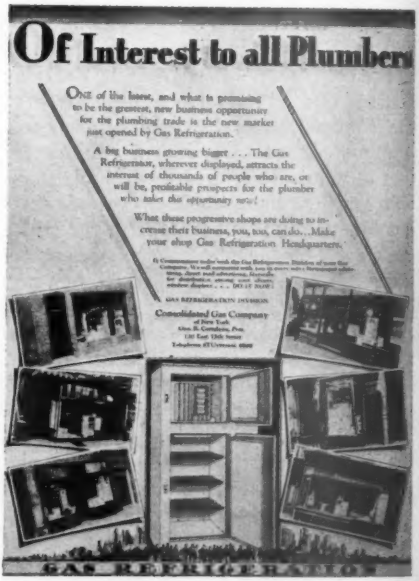
Improvements Made in Advertising Service

SEVERAL innovations and improvements have been made in the popular advertising copy service offered to gas company members of the American Gas Association by the Publicity and Advertising Section. The August issue is the first issue to incorporate these new features.

Ten advertisements are offered each month, and the service is mailed far enough in advance to enable the commercial and advertising managers to schedule their programs for the coming month. While thirteen advertisements have been given every month up to this time, it was felt by a special committee appointed by the Section's Managing Committee that ten advertisements would satisfy the needs of all gas companies subscribing.

One of the most valuable of the new features is the incorporation of a special sheet which contains proofs of all the illustrations used in the advertisements for the current month. This will enable the advertising manager to keep a file of especially prepared and well-executed illustrations for use in advertisements, folders, house organs, etc.

Companies desiring information on this advertising copy service are requested to write to the Publicity and Advertising Section, American Gas Association, 420 Lexington Ave., New York, N. Y.


Of Interest to all Plumbers
One of the latest, and what is promising to be the greatest, new business opportunity for the plumbing trade is the new market just opened by Gas Refrigeration.
A big business growing bigger . . . The Gas Refrigerator, wherever displayed, attracts the interest of thousands of people who are, or will be, profitable prospects for the plumber who takes this opportunity serv[e]
What these progressive shops are doing to increase their business, you, too, can do. . . Make your shop Gas Refrigeration Headquarters.
GAS REFRIGERATION DIVISION
Consolidated Gas Company
of New York
GAS REFRIGERATOR

The refrigerator becomes one means of stimulating allied trades cooperation

COMMERCIAL SECTION

J. J. BURNS, Chairman G. M. KARSHNER, Vice-Chairman
J. W. WEST, Jr., Secretary

Field Survey for Sales Course in Full Swing

Data Will Be Used in Making Plans for Custom-Built Salesmen's Training Course

THE field survey of selling practices in the domestic end of the gas industry has been pushed vigorously during the months of May, June, and July, and will be completed very shortly. The custom-built Salesmen's Training Course of the Association will be built around the results of this survey. For the past three months representatives of the Business Training Corporation have been collecting shopping experiences; they have been accompanying outside salesmen on their rounds; and they have been interviewing officers and sales executives of member companies and of appliance manufacturers.

All together about three hundred survey reports have now been collected each one giving a full account of what took place in the shopping experience, complete details of all information gathered in the interviews, and a full report of interviews in homes on trips made with outside salesmen.

In conducting this survey, both men and women have been employed to gather these shopping experiences, and eleven of their representatives have been conducting the interviews with officers and other sales executives. It is pleasant to report that their reception has been most favorable wherever they have gone and executives have given much time and enthusiastic cooperation in helping them to secure the information which is needed to build the course.

The survey was so planned as to cover every type of city and town where gas is sold, to yield a complete cross-section picture of every phase of domestic selling conditions in the industry, to provide widespread and adequate geographical distribution in both shopping and interviews in order that the information obtained be thoroughly representative and national in scope.

Representatives have travelled into the South visiting Baltimore, Greensboro, Atlanta, Jacksonville, Birmingham, and other cities. They have gone into New England—New Haven, Springfield, Providence, Haverhill, Boston, and other places. They have covered cities and towns in New York, Pennsylvania, Ohio, Indiana, Illinois, and Kentucky. They have crossed the other side of the Mississippi visiting Kansas, Texas, Oklahoma, Iowa, Wisconsin, Minnesota, and Nebraska. Cities like Tacoma, Seattle, Portland, San Francisco, and Los Angeles have been visited on the Pacific Coast.

The findings from these interviews and shopping experiences will very shortly be furnished to the Association with a summary report and recommendations based upon these findings. An outline of the course will then be made and the actual work of writing and preparing the course will begin.

As has been stated, the course will be ready for use about the middle of October, and further information regarding it will be given in the September issue of the MONTHLY.

Wanted

THE Department of Economics of Stanford University is desirous of securing a copy of the 1916 Proceedings of the National Commercial Gas Association for its library. Those willing to donate a copy are requested to communicate with Eliot Jones, professor of public utilities, Stanford University, California.

Study of 2000 Water Heater Advertisements Reveals Facts

A CAREFUL survey of 2000 gas water heater advertisements appearing in newspapers over the signature of gas companies brings out many interesting facts, according to M. M. Scott, of the Ruud Manufacturing Co., Pittsburgh, Pa., who conducted the review.

Mr. Scott studied the advertisements taken from press clippings on a national basis during the spring of 1928.

"Of the advertisements studied, there were 305 devoted to the tank heater exclusively," Mr. Scott says. "Advertisements featuring automatic water heaters only amounted to 1646, and there were 49 advertisements covering both types of heaters.

"There were 1020 advertisements in which price was the dominating feature, and 370 in which service was the dominating feature. Advertisements featuring both price and service totaled 610, and the number of advertisements covering service alone were so small as to be practically negligible.

"Fifty-seven of the advertisements featured plumber cooperation, while 1943 did not mention it."

Beware of Modern Art

(Continued from page 500)

which heretofore could alibi itself, charging lack of results to operating rather than to merchandising.

Today also we find the utilities shouldered with the job of selling large consumption appliances to a greater degree than ever before. We refer to gas house heating, water heating, incinerators, laundry driers, industrial installations, refrigeration, etc. This requires better salesmanship and better advertising. It emphasizes the increasing responsibility of advertising. No longer can we rush together an advertisement featuring a number of small appliances. Now careful campaigning must be done covering the educational and merchandising phases of the product.

And in this connection, as well as in other lines of our endeavor, it becomes more essential than ever before that we buy our newspaper space on a sound and economical basis. Many of the products which we are advertising appeal to definite classes. The newspapers or other media that most economically reach our prospective markets are the media that should be employed to carry our messages on each product or a service.

There was a time when all newspapers, good, bad or indifferent, and I speak solely from the circulation standpoint, were utilized to carry the utility story to the public. That day, I believe, is passing. It is wasteful, uneconomical, and a retarder of progress. Newspaper space should be purchased, we feel, on the same basis that is applied to other purchases made by the utility organizations, viz., quality, price, and performance.

Again this year the committee calls to your attention the steady progress which has been made on the identification of public utility properties with electric signs, painted bulletins, and other similar insignia. This is a step in the right direction. Most companies today are standardizing on these programs of identification.

During the past year there have been a number of outstanding examples of community advertising in which the utility companies have assumed either the leadership or have been most active participants.

It would be interesting, we believe, for this Association to secure more complete information as to the participation of the utilities in these community advertising programs and the actual results attained. While the results in themselves may sometimes prove a disappointment, the utility companies participating in these campaigns should not lose sight of the fact that their active co-operation is an important builder of that intangible and unappraisable asset called good will.

Again the Committee calls to the attention of the membership the advertising for the benefit of the industry that has been done in the national field by the manufacturers.

TECHNICAL SECTION

WALTER C. BECKJORD, Chairman HARRY E. BATES, Vice-Chairman
H. W. HARTMAN, Secretary

What Is the Coke Situation Today?

(Continued from page 472)

He outlined the advantages and disadvantages of stocking run-of-oven coke as contrasted with screened coke and said that on the whole, the disadvantages seem to outweigh the advantages and make the stocking of sized coke preferable to run-of-oven. He also discussed another question in connection with coke storage on which there is wide difference of opinion and that is the desirability of complete rescreening of sized coke taken from storage.

He continued as follows:

"High line conveyors with trippers are probably the most satisfactory equipment for stocking coke. Bridges and conveyors with traveling hoppers fed by cranes are most economical in operation for reclaiming large quantities. Conveyors running in tunnels under stock piles, fed somewhat similar to those under track hoppers, probably produce minimum breakage in reclaiming but require excessive initial investment.

In describing the physical characteristics of coke for various uses, H. M. Chapman, Troy, N. Y., emphasized particularly uniformity of quality, saying:

"It may be propounded here, that uniformity of quality is of greater value, even, than standard of quality. This follows from the fact that almost any process employing coke will suffer more from a maladjustment due to variation in performance from day to day than it will suffer from the use of an inferior coke, if only it be *reliably* inferior.

This paper was printed in full in the July issue of the MONTHLY.

R. C. Edmunds, Utica, N. Y., presented a comprehensive picture of the coke merchandising problem. He said that the maximum sales of domestic coke by each utility is an economic necessity when the fact is considered that the base load of most cities must be carried with a coal gas plant. In the summary of his paper Mr. Edmund said:

"Quality of the coke from the coal purchased to the screened product in the trucks is 40 or 50 per cent of the sales argument.

"Timely advertising with the properly chosen appeal is necessary to insure a territory becoming 'coke-conscious.'

"Well-trained salesmen and a simple sales plan work well together. Any sales plan that is complicated to the salesmen is complicated to the customer and hence difficult to put across in newsprint. Such plans prove to be a boomerang to the office force during the year as they must waste time clarifying misunderstandings.

"Demonstrating coke to all new customers with or without request is money well spent.

"Delivery service of the best type, and a strict rule that all delivery promises made must be kept."

Application of Probability Curve

(Continued from page 496)

1906 to 1916, gave an average life of 58 years for the wrought iron and of 45 years for the steel.

When the average life of the services installed in each year was calculated, using the same method, it was found that the average life of the wrought iron services installed from 1903 to 1906 showed a considerable decrease over those installed from 1898 to 1902. The steel services showed the same erratic variation from year to year. This indicated that the soil conditions rather than the material were responsible for the difference in the average life of the wrought iron and the steel. The two periods, 1898-1906 and 1906-1916 are therefore not comparable due to differences in the soils in which the services were buried.

Our final conclusion is therefore that the apparent difference between the average life of the wrought iron and steel services is due not to the material but to change in the soil conditions in which the material was buried.

House Heating Experiment

(Continued from page 465)

corner. On this day the outside temperature was 12° F.

No attempt was made to humidify the air of the house, as it was realized that in a new house the slow drying of the plaster should furnish moisture. Tests for relative humidity were taken occasionally during the winter. It was noted that the relative humidity varied from 22 per cent to 57 per cent while the cellar had between 47 per cent and 66 per cent. The proper humidity for healthy conditions as stated in the American Gas Association book on House Heating, specifies the best range as between 35 per cent and 45 per cent.

Table 2 is a summary showing the relation between the monthly gas consumption and the degree days.

The demand meter consists of an ordinary gas meter in the top of which is inserted a drum which carries a chart. The drum is moved by clock-work and the chart is marked in days and hours. Whenever ten feet of gas have passed through the meter, a pin on the axle of the 100-ft. dial engages with a lug which moves the pen and a mark is made on the chart. By counting the marks made in any hour, the cubic feet of gas passed in that hour may be determined.

Plate 3 has been compiled from the demand meter charts and shows the average hourly gas used from January 12 to March 31, 1927. It will be noted that the heating load went on at 4 A.M., the peak being reached between 6 A.M. and 7 A.M. There was another peak between 8 A.M. and 9 A.M. and a lessened demand during the day until evening, when a final peak was reached between 7 P.M. and 9 P.M. The three months show similar characteristics.

Table 2 also shows the cost of gas used in heating the house, together with the percentage of gas used during each month from October 18, 1926, to May 18, 1927, a period of seven months. The total gas used was 299,400 cu.ft., which at $1.15 per M amounted to $344.31. This is equivalent to 23.75 tons of anthracite coal at $14.50 per ton.

Record Crowd at N. E. Sales Conference

A RECORD number of gas men attended the New England Regional Sales Conference, which was held at Lake Spofford Inn, N. H., June 22 and 23. Cooperative advertising and cooperation with allied trades were the keynotes of the gathering.

W. W. Duncan, of the Hood Rubber Co., diagnosed present-day selling problems in a paper on "My Conception of Your Merchandising Problems." This was followed by a paper on selling water heating for apartments by Milton H. Locke, of the Pawtucket Gas Co. J. J. McKearin presented the report of the water heating committee.

Col. A. W. Archer, Plumbers & Heating Industries Bureau, appealed for more cooperation between gas companies and the allied trades, and Roscoe Edlund, of Cleanliness Institute, described the cooperative work of his organization.

The New England plan of cooperative advertising was described by J. J. Quinn, of the Citizens Gas Co., Quincy, Mass. G. M. Karshner, Consolidated Gas Co. of N. Y., discussed selling the newer uses for gas. A. E. Higgins also described the meaning of the laboratory approval seal.

An enjoyable entertainment program had been arranged for those attending.

Leaders Will Address Convention

(Continued from page 452)

sion of topics and a close study of impending developments. All meeting rooms this year will be amply large to accommodate the large number of persons expected. There will be no crowding, and sufficient ventilation and proper acoustics will be features. This year the section and department programs will be of a particularly high order of excellence, and many of the speakers have a national reputation.

As already stated the exhibition will be the largest ever held by the A. G. A. Practically every square foot of exhibit space on the Million Dollar Pier has been sold.

Aspects of Merchandising

(Continued from page 479)

stock for resale, its appraised value at the time it is returned, plus the cost of any material to re-condition it should be used in recording stock values.

The installation of appliances should be done promptly. Appliances must be installed when the customers desire them. This may be difficult for the installation department to realize unless it appreciates the fact that appliances are sold in competition with other retailers and any inconvenience to a customer brought about in installation work jeopardizes the sales work of the merchandising department especially with regard to future business.

Invariably, a customer desires to posses the article as soon as the order is signed. It is not difficult for the sales department to explain to the customers' satisfaction that a certain amount of time is required to install an appliance, but it is quite another thing to convince him that any delay on our part is justified.

While it is advisable in some cases to have the appliance installation department placed under the direct supervision of the sales department, a well-organized installation department, having its own department manager and working in close cooperation with the sales department, will accomplish excellent results.

Every gas and electric appliance sold to a customer will bring added revenue to the public utility only if it is used. The amount of the revenue from this source depends entirely on the extent to which the appliances are utilized. One of the most important factors in governing the use of appliances is the satisfaction the customers get from the performance of their appliances. The work of the sales department in placing the appliances on the lines ought to be adequately supplemented by a consistent effort to keep the appliances in operating condition, and thus uphold the faith of the customer in the appliance and the company.

Due to the fact that this service to customers is of material help in maintaining, and even increasing, the load on the lines of the company, there seems to be no logical reason to charge the sales department with the expense involved in this activity.

One of the most valuable aids to a merchandising organization is a well-kept system of records and forecasts, wherein it can review its past accomplishments, see the trend of its present progress and visualize its future possibilities.

A partial list of reports, found to be helpful in public utility merchandising is given here:

(1) Sales and Volume by Salesmen (Monthly)
(2) Appliances Sold and Quantity (Monthly)
(3) Load-building Value of Appliances Sold (Monthly)
(4) Canvass Record of Each Salesman (Daily)
(5) Appliance Stock Inventory (Monthly)
(6) Sales Report (Income, Expense and Net) (Monthly)

These reports should be compiled for use in the districts and similar reports, with the exception of number (4), sent to the General Office where complete reports will disclose the totals for all districts.

A market analysis which will cover the territory served by the company, with allowance made for proposed extensions, should be made in order to forecast the potential volume of business. It will assist the company in making advance preparations for the future operation of its merchandising activities.

Much could be written about stock turnover that would be particularly applicable to the merchandise handled by the public utility. From the standpoint of the depreciation of goods the utility suffers to a comparatively small degree. However, it must be taken into consideration that modern tastes are being greatly influenced by new ideas in styles that rapidly come and go. Appliances alike in every other respect, except their finish, will have widely different sales volume. To emphasize the point more fully—last year's automobile is antiquated by today's, simply by means of creating a new style color scheme or radiator design. This

influence is being felt in the public utility industry and has a bearing on how soon stock should be disposed of and in what quantities it should be acquired. Quick stock turnover is desired in public utility merchandising just as it is in any retail business and for substantially the same reasons.

It has been proven beyond any question of doubt that meetings of all people, involved in any way with the program of utility merchandising, is a good thing to promote. Sales, service and installation department meetings and interdepartment meetings are profitable both from business and social angles. Business meetings of the various groups are productive of new and better ideas created by the exchange of opinions and experiences.

These meetings should be conducted systematically and on a regular schedule. Daily sales department meetings conducted by the appliance manager are a big help in improving the efficiency of sales people. Monthly meetings of appliance managers of all districts contribute in no small degree to the success of the whole program.

In many of its details, utility merchandising differs greatly from that of any other kind of retail business, but the fundamental principles are identical with those which form the basis of all good merchandising.

The plan as outlined above has been substantially applied to the merchandising activities of The Connecticut Light and Power Company. A true measure of its soundness in principle and detail is reflected in the results that have been achieved.

SALES VOLUME—210% INCREASE IN PAST 5 YEARS

25	% increase	1924	over 1923
14.6%	"	1925	" 1924
41 %	"	1926	" 1925
49 %	"	1927	" 1926

The sales for April, 1928, passed $120,000 and the 1928 forecast of well over $1,000,000 is quite likely to be exceeded by a substantial margin.

Analyzing the Survey

(Continued from page 462)

was next made. First, nine major divisions were selected as follows:

1. Food products
2. Ceramics
3. Textile
4. Newspapers and periodicals
5. Paint and varnish
6. Chemical
7. Metal products
8. Foundry
9. Miscellaneous

Then each major discussion was subdivided as required. For example:

8. Foundry
8.1 Brass melting
8.2 Aluminum melting
8.3 Other non-ferrous melting
8.4 Core baking
8.5 Steam
8.6 Miscellaneous

By this classification of heating operations the potential consumption at any given rate for any operation is readily disclosed and is available for references at all times. Naturally this information is of great value for without it research cannot be directed into the most lucrative channels nor will class advertising be directed properly.

Although the foregoing about covers all of the tabulations and summaries that were made, it by no means exhausts the possibilities of analysis, and undoubtedly other gas companies have gone into even greater detail. However, it is felt that the outlined method covers the major phases that the analysis was designed to show.

In conclusion, let it be borne in mind that the analysis is only a means to an end and not the end itself, and that, regardless of its completeness, if action based on the facts brought out is not taken, nothing tangible will result.

Associations Affiliated with A. G. A.

Canadian Gas Association
Pres.—Frank Elcock, Ottawa Gas Co., Ottawa, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., 1929.

Empire State Gas and Electric Association
Pres.—H. O. Palmer, Empire Gas & Electric Co., Geneva, N. Y.
Chairman Gas Section—H. E. Merrill, Republic Light & Power Co., Tonawanda, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Conv., Upper Saranac, N. Y., Sept. 20 and 21, 1928.

Illinois Gas Association
Pres.—J. A. Strawn, Central Light Co., Peoria, Ill.
Sec.-Tr.—R. V. Prather, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., 1929.

Indiana Gas Association
Pres.—T. J. Kelley, Northern Indiana Public Service Co., Fort Wayne, Ind.
Sec.-Tr.—F. B. Tracy, Central Indiana Gas Co., Muncie, Ind.
Conv., 1929.

Michigan Gas Association
Pres.—F. A. Newton, Consumers Power Co., Jackson, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., 1929.

Mid West Gas Association
Pres.—H. R. Sterrett, Des Moines Gas Co., Des Moines, Iowa.
Sec.-Tr.—A. W. Schmidt, Des Moines Gas Co., Des Moines, Iowa.
Conv., 1929.

Missouri Association of Public Utilities
Pres.—A. E. Reynolds, Springfield Gas & Electric Co., Springfield, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Conv., 1929.

New England Gas Association
Pres.—G. W. Stiles, Portland Gas Light Co., Portland, Me.
Exec. Sec.—C. D. Williams, 41 Mount Vernon St., Boston, Mass.
Chairman Operating Div.—H. Vittinghoff, Stone & Webster, Inc., Boston, Mass.
Secretary Operating Div.—H. G. Taylor, Lawrence Gas & Electric Co., Lawrence, Mass.
Gov. Sales Div.—M. B. Webber, Marlboro-Hudson Gas Co., Boston, Mass.
Sec.-Tr.—Sales Div.—J. H. Sumner, 719 Massachusetts Ave., Cambridge, Mass.
Pres. Industrial Div.—E. W. Berchtold, Boston Con. Gas Co., Boston, Mass.
Sec.-Tr. Industrial Div.—L. E. Wagner, Providence Gas Co., Providence, R. I.
Chairman Acctg. Div.—W. A. Doering, Boston Con. Gas Co., Boston, Mass.
Sec.-Treas. Acctg. Div.—Otto Price, Boston Con. Gas Co., Boston, Mass.
Conv., 1929.

New Jersey Gas Association
Pres.—H. A. Stockton, County Gas Co., Atlantic Highlands, N. J.
Sec.-Tr.—Louis Stoecker, Public Service Electric & Gas Co., Newark, N. J.
Conv., 1929.

Ohio Gas and Oil Men's Association
Pres.—J. J. McMahon, The East Ohio Gas Co., Cleveland, O.
Sec.-Treas.—Wm. H. Thompson, 811 First National Bank Bldg., Columbus, O.
Conv., 1928.

Oklahoma Utilities Association
Pres.—L. W. Scherer, United Telephone Corp., Yale, Okla.
Mgr.—E. F. McKay, 1020 Petroleum Bldg., Oklahoma City, Okla.
Conv., 1929.

Pacific Coast Gas Association
Pres.—L. M. Klauber, San Diego Consolidated Gas & Electric Co., San Diego, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Coronado, Calif., Sept. 17-21, 1928.

Pennsylvania Gas Association
Pres.—Mark Pendleton, Pennsylvania Gas & Electric Co., York, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
Conv., 1929.

Pennsylvania Natural Gas Men's Association
Pres.—George W. Ratcliffe, Columbia Gas & Electric Corp., Pittsburgh, Pa.
Sec.-Treas.—E. J. Stephany, Equitable Gas Co., Pittsburgh, Pa.
Conv., 1929.

Southern Gas Association
Pres.—Roy A. Zeigler, Jacksonville Gas Co., Jacksonville, Fla.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., 1929.

Southwestern Public Service Association
Pres.—W. H. Burke, Stone & Webster, Inc., Houston, Texas.
Chairman Gas Section—R. A. McNees, San Antonio Public Service Co., San Antonio, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
Conv., 1929.

The Public Utilities Association of Virginia
Pres.—J. W. Hancock, Roanoke, Va.
Sec.—A. B. Tunis, 301 East Grace St., Richmond, Va.
Conv.

Wisconsin Utilities Association
Pres.—C. R. Phenicie, Wisconsin Public Service Corp., Green Bay, Wis.
Exec.-Sec.—J. N. Cadby, 432 Broadway, Milwaukee, Wis.
Conv., 1929.

Tenth Annual Convention of the American Gas Association
Atlantic City, N. J. October 8-12, 1928

Employment Bureau

(Address All Communications to Key Number)

SERVICES REQUIRED

WANTED—Live wire organization preferably, or an established individual to represent manufacturer of a new type—nationally advertised water heater. Full cooperation and generous commissions paid. Water heater is now completed and selling fast. Address A. G. A.
Key No. 0113.

SERVICES WANTED by established manufacturers of Industrial Gas Appliances Resident representatives for new equipment highly interesting to all Industrial Gas Engineers. Address, A. G. A.
Key No. 0116.

GAS ENGINEER: Company manufacturing gas plant apparatus has an opening for a gas engineer. Must be familiar with water gas plant operation and apparatus. About 30 to 35 years of age. Give detailed experience and salary expected in applying. Address A. G. A.
Key No. 0117.

WANTED—Gas Sales Engineer experienced in application of gas, particularly in industrial processes. Address American Gas Association stating age, experience and salary desired.
Key No. 0118.

CONSTRUCTION ENGINEER—who has had experience in gas mains work is required by a holding company for a building of a new plant in the South. All applicants are required to state full qualifications and salary requirements in first letter. Address A. G. A.
Key No. 0119.

WANTED—Superintendent experienced in design and production gas ranges and heaters for new company in Southwest. Also need sales manager. Can acquire financial interest but not essential. State fully experience, qualifications and expected salary. Box Address A. G. A.
Key No. 0120.

WANTED—By large producing coal and coke company, Combustion Engineer familiar with gas, by-product plant and boiler operation, to cooperate with Sales Department. Prefer man with experience in New England and Eastern Territories. State reference and detail experience. Address A. G. A.
Key No. 0121.

GAS SALES ENGINEER—Large Eastern Utility Company desires engineering graduate, preferably with experience in application of gas to industrial processes. Please state age, education, experience, and salary desired. Address A. G. A.
Key No. 0122.

WANTED—Young gas engineers for Company in Middle West, with some experience on either gas plant operation or distribution or both. Should be technical graduates, out of college at least two or three years. Opportunities excellent. Address A. G. A.
Key No. 0123.

SERVICES OFFERED

AGGRESSIVE MANAGER or General Superintendent, 25 years in the industry, familiar with all branches of operation and construction. Best of references. Available now. Address A. G. A.
Key No. 246.

ASSISTANT TO EXECUTIVE: Married, 37 years old, secretary to well-known executive in New England company wishes similar position in medium size company. Anywhere. Best of references. Reason for change, reorganization of management. Address A. G. A.
Key No. 247.

POSITION WANTED—Auditor or Office Manager, Middle West preferred. Sixteen years' experience in local and general offices; coal and water gas accounting; coke distribution; rate promotion; mechanical bookkeeping systems; all phases of commercial department, city and suburban territory. Married. Age 38. Excellent health and splendid personality. Address A. G. A.
Key No. 248

WANTED—Position as manager of small progressive gas company in a growing community by technical graduate, 36 years old. Married. Twelve years' experience including water gas plant construction and operation, High- and Low-Pressure Distribution, including Meters and Regulators. Special emphasis on Public Relations work. Address A. G. A.
Key No. 249.

GAS DISTRIBUTION FOREMAN desires to change his position. Experienced in laying mains and services on both high- and low-pressure, good man on governors, can weld pipe. Also considered a first-class fitter on automatic, storage, tank water heaters, house heating systems, and other appliances. Will start as fitter or welder if there is chance for advancement. Address A. G. A.
Key No. 250.

EXPERIENCED—"Employee and Public Relations Man." Well grounded in knowledge of public utility organization business. Deeply interested and specially experienced in all work pertaining to public and employee relations work. Capable of executive position of responsibility. Address A. G. A.
Key No. 256.

AGENT—A man of broad sales experience and acquaintance in the gas industry and other trade outlets of Southwest desires sales agency for line of gas equipment in Texas and adjoining territory. Address A. G. A.
Key No. 257.

TECHNICAL MAN now employed desires new location. 38 years of age. 16 years' experience in coal and water gas manufacture, sales and distribution; also one year's experience with a coal company sampling coal in mines, from cars and special research work. Address A. G. A.
Key No. 259.

STUDENT ENGINEER desires position with gas company where he can finish his course and with opportunity for advancement. Address A. G. A.
Key No. 260

HOUSE HEATING MANAGER—Desires a change from present location. Thoroughly experienced in gas heating and also gas refrigeration. Technical graduate, 26 years old. Single. Available within reasonable length of time after notice is given to present employers. Address A. G. A.
Key No. 262.

SUPERINTENDENT with exceptional record for Improving Results; Plant, and Personnel, desires position either as Superintendent or Manager. Address A. G. A.
Key No. 264.

CHEMICAL ENGINEER—38 years of age—15 years' experience in water and Coal Gas Plant operation, construction, distribution, and By-Product Plant work, desires connection as Gas Engineer with a holding company, or large individual gas company. Address A. G. A.
Key No. 265.

WANTED—Position as manager of a small gas company or assistant superintendent of a larger company, by practical man, 36 years old. Married. 12 years' experience including water gas plant operator both high and low pressure, also all branches of distribution. Best of references. Address A. G. A.
Key No. 266.

GAS ENGINEER with twenty years' wide, practical experience in the design, construction and operation of coal, water, coke oven, and natural gas plants and distribution systems located in all parts of the U. S. A., is desirous of an opportunity in a similar capacity with consulting engineer or holding company. Experience covers large, medium and small properties. Technical education. Address A. G. A.
Key No. 268.

Advisory Council

T. R. Beal ..... Poughkeepsie, N. Y.
F. L. Blanchard ..... New York, N. Y.
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